1	IN THE UNITED STATES DISTRICT COURT IN AND FOR THE DISTRICT OF DELAWARE
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3	NATURAL ALTERNATIVES INTERNATIONAL,) Civil Action INC., et al.,
4	Plaintiffs,)
5	v.)
6) VITAL PHARMACEUTICALS, INC., et al.,)
7	Defendants.) No. 09-626-GMS
8	
9	VITAL PHARMACEUTICALS, INC.,)
10) Counterclaim/Third-) Party Plaintiff,)
11	v. ,
12))
13	NATURAL ALTERNATIVES) INTERNATIONAL, INC., and COMPOUND)
14	SOLUTIONS, INC.,)
15	Counterclaim/Third-Party) Defendants.)
16	
17	COMPOUND SOLUTIONS, INC.,
18	Third-Party Plaintiff,)
19) ▼.)
1)))
20	DNP INTERNATIONAL CO., INC.,)
21	Defendant.)
22	
23	Wilmington, Delaware Thursday, May 12, 2011
	9:30 p.m.
24	Markman Hearing
25	BEFORE: HONORABLE GREGORY M. SLEET, Chief Judge

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2	APPEARANCES:
3	DAVID E. MOORE, ESQ. Potter Anderson & Corroon LLP -and-
4	SCOTT A.M. CHAMBERS, ESQ. RICHARD OPARIL, ESQ.,
5	WILLIAM JOHN McKEAGUE, ESQ. (McLean, VA), and KEVIN M. BELL, ESQ.
6	Patton Boggs LLP (Washington, D.C.)
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8	Counsel for Plaintiffs
9	FRANCIS DiGIOVANNI, ESQ., and KEITH A. WALTER, JR., ESQ.
10	Connolly Bove Lodge & Hutz LLP
11	Counsel for Defendant Vital Pharmaceuticals, Inc.
12	APPEARANCES CONTINUED:
13 14	PILAR KRAMAN, ESQ. Young Conaway Stargatt & Taylor, LLP -and-
15	STEVEN R. HANSEN, ESQ. Lee Tran & Liang APLC (Los Angeles, CA)
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17	Counsel for Defendant DNP International, Inc.
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1	THE COURT: Good morning, counsel. Counsel,
2	please take your seats.
3	Why don't know we start out with a round of
4	reintroductions, beginning with plaintiff.
5	MR. MOORE: Good morning, Your Honor. David
6	Moore from Potter Anderson on behalf of the plaintiffs.
7	With me today, closest to me Scott Chambers, John McKeague,
8	Richard Oparil, and Kevin Bell from Patton Boggs.
9	THE COURT: Good morning.
10	(Counsel respond "Good morning.")
11	THE COURT: Mr. DiGiovanni, good morning.
12	MR. DiGIOVANNI: Good morning, Your Honor.
13	Frank DiGiovanni from Connolly Bove. With me representing
14	one of the two defendants, Vital Pharmaceuticals, is my
15	partner Keith Walter.
16	THE COURT: Mr. Walter.
17	MR. WALTER: Good morning, Your Honor.
18	THE COURT: Counsel.
19	MS. KRAMAN: Good morning, Your Honor.
20	THE COURT: Good morning. I don't think we have
21	had the pleasure.
22	MS. KRAMAN: Pilar Kraman from Young Conaway. I
23	am here representing DNP International. With me is Steve
24	Hansen.
25	MR. HANSEN: Good morning, Your Honor.

1 THE COURT: Good morning. 2 Counsel, it seems like we have allotted four 3 hours for this. 4 MR. CHAMBERS: Yes, Your Honor. 5 THE COURT: If memory serves. I certainly hope we don't take four hours. If it is looking like we are 6 7 going to need the full allotment, I am probably going to want to break for lunch around 12:30. If you think we can 8 9 get finished by 1:00, that would be a good thing. 10 Otherwise, I am going to get hungry and irritable after 11 that. I am being a little facetious. 12 Have you discussed among yourselves how you 13 would like to proceed this morning? 14 MR. CHAMBERS: Yes, Your Honor, we have, at 15 least in the beginning. We have agreed to the fact that the 16 terms beta-alanine and L-histidine should be construed 17 together. And then plaintiffs believe that active 18 derivative should be construed at the same time. 19 defendants believe that it should be construed separately. 20 THE COURT: When you say construed, you mean 21 argued. 22 MR. CHAMBERS: Argued, yes. 2.3 THE COURT: I guess I do the construing and you 24 do the arguing.

MR. CHAMBERS:

I am sorry.

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1 The reason is, a lot of the evidence that goes 2 to describing what an active derivative is also supports plaintiffs' view of what beta-alanine is. So we think it 3 4 makes most sense to put them together. We could either go term by term or we could go all at once and you could pepper the argument with questions 6 7 as we go through, or however you would like to do it. THE COURT: Well, on the term-by-term point, do 8 9 counsel have an agreement as to process on that? 10 MR. DiGIOVANNI: Your Honor, actually, we had 11 agreed that we would go term by term. I thought the only 12 disagreement was whether to include within the 1.3 beta-alanine/L-histidine argument the argument with regard to active derivative. 14 1.5 I hadn't heard that before. MR. CHAMBERS: 16 THE COURT: Is term by term acceptable to 17 plaintiff? 18 MR. CHAMBERS: Term by term will be fine, 19 especially if we can keep the three together. THE COURT: Let's talk about that for a minute. 20 21 MR. DiGIOVANNI: Your Honor, we did not brief 22 the three together. The L-histidine and beta-alanine were 2.3 briefed together. And we believe that active derivative 2.4 should be handled separately, although immediately after the

beta-alanine and L-histidine argument. I think there are

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certainly some differences between what ought to be used to construe those claims or that particular claim term.

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THE COURT: When you say what ought to be used, what are you talking about?

MR. DiGIOVANNI: I am talking about the various -- well, active derivative is actually a term that didn't come until one of the later patents. It doesn't even appear in the first patent. So I think some of the arguments that are going to be made don't pertain to active derivative.

So we think the beta-alanine and L-histidine should be handled separately, or else there is going to be some issues that could get confused together. We think, just like in our briefing, they ought to be handled separately, although immediately thereafter.

MR. CHAMBERS: Your Honor, when you look at our briefing, you find that some of our discussion of active derivative, in fact, the way that we interpret active derivative is within the context of the claims.

Now, active derivative goes to a Markush group, and the Markush group and says a beta-alanine, an ester of beta-alanine, or an amine of beta-alanine. So active derivative has to go with those three terms. Otherwise, it's just, you know, trying to determine what it means in a vacuum.

THE COURT: You are essentially saying just what he just said: The Court needs context, essentially, in order to properly construe.

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MR. CHAMBERS: Yes. We will be repeating some of the same evidence if we do it --

THE COURT: What if any prejudice would either defendant suffer were I to accept the approach, not talking about the substantive arguments, just the approach that is being suggested by plaintiff?

MR. DiGIOVANNI: Your Honor, I would say there is no prejudice. I would just say from an organizational standpoint, it's better to take the active derivative term separately.

THE COURT: Do you think it will confuse things for me?

MR. DiGIOVANNI: Not for you, Your Honor. I just think, generally, most of the record does not overlap in terms of active derivative, so it makes sense to keep it together.

THE COURT: Here is what I will do. I am going to accede to the urgings of plaintiffs' counsel. To the extent that defendants want to call out differences or reasons why I should be mindful of the fact that active derivative was not included in the briefing in the manner suggested or that it is going to be presented today and to

the extent that that will inform my efforts, I will certainly wait on that.

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So that is what we will do.

I notice one of the parties included some quidance in its discussion of the applicable law on extrinsic evidence, I am not sure which one, I don't remember. I wanted to make sure its clear, and I know you know this, Mr. DiGiovanni, and hopefully other counsel as well, of my typical practice in this regard. It is probably called out, I think, in citing to Vitronics, I believe, that to the extent that extrinsic evidence will help the Court understand the technology, I am willing to hear that. am not going to hear extrinsic evidence today. I am just raising that as a point so I don't have to field objections or deal with efforts at presenting extrinsic evidence outside of the dictionary context that may be offered to help me understand the technology. I don't think I am going to need that because I know I have able counsel here who are going to do a good job of tutoring me on the chemistry involved.

Any questions about that or concerns?

MR. CHAMBERS: Your Honor, we will present it just so it covers intrinsic evidence.

THE COURT: That is what I am telling you to do, unless you have an argument that you want to make to me --

1	Judge, there is cause for you to hear this and the cause is
2	that it's going to help you understand the technology.
3	MR. DiGIOVANNI: We did cite to some
4	dictionaries for one of the terms.
5	THE COURT: That is fine.
6	MR. DiGIOVANNI: And to one concurrent patent
7	with one of the other terms.
8	THE COURT: Are you going to have difficulty
9	with that?
LO	MR. CHAMBERS: If they are going to bring in
L1	patents outside the family, we will probably want to raise
L2	an objection.
L3	THE COURT: That is fine.
L 4	MR. CHAMBERS: And we will want to address it.
L5	THE COURT: Unless offered within the context
L 6	that I just discussed, I won't accept that evidence.
L7	MR. CHAMBERS: For that reason, Your Honor, I
L 8	won't bother to do it, since I am going to be going first.
L9	THE COURT: Counsel.
20	MR. HANSEN: Your Honor, this seems related. We
21	have a few introductory slides that are depictions of some
22	of the molecules and a depiction of the pathway.
23	THE COURT: Those are demonstratives. Right?
24	MR. HANSEN: I want to make clear that is okay.
25	THE COURT: I am talking about evidence, not

1 demonstratives.

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Any other housekeeping matters?

Here, we will do it term by term. I will give the plaintiff the last word on a brief rebuttal to the defendants' positions on the various terms.

MR. CHAMBERS: Your Honor, thank you.

MR. DiGIOVANNI: Your Honor, one additional thing. I have conferred with my co-defendant's counsel, and we have designated a lead person to take the argument for each of the various terms.

THE COURT: Okay.

MR. DiGIOVANNI: The other party may have something to add afterwards. So we have designated a lead person. And in addition, Mr. Hansen is going to do a brief technology tutorial.

THE COURT: Okay.

Are you asking me to find out whether the plaintiff would have any objection to a little supplementing to the lead's position?

MR. DiGIOVANNI: To the extent Your Honor finds it objectionable -- the two defendants are separate. So I thought Your Honor's practice was to allow each defendant to --

THE COURT: You can. But if you designated a lead as a timesaving device, that's great.

1 MR. DiGIOVANNI: I wanted to let you know, that 2 is what we have done. 3 THE COURT: So I don't have to hear repetitive 4 arguments. 5 MR. CHAMBERS: Our only objection would be if they are repetitive -- there was a single brief that we were 6 responding to, that was a combined brief. If they are going 7 to be repetitive about some of these things, that would 8 9 trouble us. 10 THE COURT: That is fine. Just as in an evidentiary proceeding, if you have objections, the fact of 11 12 the matter is that while we are not formally presenting 13 evidence, this Court is going to be asked to find some 14 facts, in spite of the de novo standard. 15 My little dig there. 16 Let's go, counsel. 17 MR. CHAMBERS: Thank you, Your Honor. 18 morning. 19 This invention at its most basic level is a 20 nutritional supplement that let's you work out longer with 21 less soreness. 22 THE COURT: Counsel, please don't be 2.3 disconcerted if from time to time I turn my attention to the 24 computer. I am listening. 25 MR. CHAMBERS: Yes, Your Honor.

1 The patents in suit use beta-alanine and 2 L-histidine, which are two amino acids. Amino acids are the building blocks of peptides and proteins. Dipeptides have 3 4 two amino acid residues that are covalently joined. 5 Oligopeptides have a few amino acid residues covalently joined. And polypeptides are many amino acid residues 6 7 covalently joined. 8 Because a dipeptide is two residues and a 9 tripeptide is three residues and a tetrapeptide is four 10 residues, sometimes a single residue is referred to as a 11 monopeptide. 12 Now, structurally, these are found on the next 13 slide, where we have one of the --14 THE COURT: Did you bring binders? 15 I am sorry. We did. MR. CHAMBERS: I will be 16 happy to pass those up. 17 THE COURT: If you could provide us with two 18 copies. 19 MR. CHAMBERS: We see in this slide the key 20 molecule of this patent, which is beta-alanine. 21 beta-alanine has an amino side and it has a hydroxyl side. 22 The patent also describes beta-alanine esters. And those 2.3 are, the beta-alanine when it's joined, it no longer has

It also talks about beta-alanine amides. That's

this hydroxyl but instead it has an ester linkage.

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when it has an amino or an amide group here instead of this hydroxyl.

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When those are combined into a dipeptide, you get the substance that is down in the lower corner, or lower left-hand corner, and that's one of the molecules that's also discussed in the patent. And you can see that in this molecule, this dipeptide, the beta-alanine no longer is in the same form as it was up here. It has lost a hydroxyl. It is no longer a beta-alanine. Instead, it is a residue. And the art calls it an amino acid residue rather than calling it an amino acid.

Now, the prior art disclosed dipeptides, such as this carnosine, used in the manner that the patents described. But the prior art didn't describe using the amino acids.

The inventors of the patent in suit invented a way to avoid muscle fatigue by regulating the ion concentration using the amino acids beta-alanine as well as L-histidine. These are the residues of those two. And you could regulate this using these amino acids rather than dipeptides. It was already known that you could use dipeptides. But the inventors discovered that using an amino acid to accomplish this was more effective and more efficient.

Now, in the original filing, the applicants set

forth a large number of embodiments. These embodiments are claimed in the patents in suit and later issued patents.

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Now, some of those later patents have claims addressing dipeptides. But most of the claims of the patents in suit are to the polypeptide -- I am sorry, most of the patents in suit are to using the amino acid, not using the residues as they would be found in the polypeptide.

The patents in suit disclose three dipeptides: carnosine, anserine, and balenine.

Plaintiffs say these dipeptides are not part of the claim. Defendants say they are. That is one of the basic issues for the Court to decide.

Now, the patents have seven terms. We are going to talk today about the group of terms beta-alanine, L-histidine, and active derivative.

The first term, of course, is beta-alanine. The second is L-histidine. Active derivative is closely related but it's intertwined because the claim says, an amino acid or active derivative selected from the group consisting of beta-alanine, an ester of beta-alanine, an amide of beta-alanine. So the meaning of beta-alanine is going to control what active derivative means in the claims at issue.

Beta-alanine is an amino acid. And both the patents in suit as well as the defendants' expert indicate

that two amino acids react to form a dipeptide.

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Defendants' position is that the claims in the patent, where there is a reference to beta-alanine, it is a reference to the amino acid and the dipeptide, oligopeptide, or polypeptide. This is confusing and it contradicts the intrinsic evidence.

Now, an important distinction that the Court has to address is the fact that the dipeptide has within it the covalently linked residues of two amino acids. But it would be scientifically incorrect to say that the dipeptide includes the two amino acids. Once the two amino acids enter into this covalent bonding, that bond is formed and the two individual amino acids no longer exist except as a residue. Then you have the dipeptide.

It's much like an apple pie. Once you take the apples, you cut them up, you put them into the crust and you bake them, you end up with an apple pie. And the residue of apples is in that apple pie. But the round apple, the actual apple, is no longer in that apple pie.

If you went to the grocer, and you said, I would like a bag of apples, and they brought you a bag of apple pies, you would think there was some kind of a mistake.

Similarly, in a dipeptide, the two amino acids no longer exist as amino acids but instead they exist as residues. And you can see that in this particular slide,

here is what an amino acid is. And it's got this hydroxyl.

Here is what the dipeptide is. It no longer has the

hydroxyl. It is, as I said before, the residue.

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Now, beta-alanine and L-histidine are two well-known amino acids, and the Court should construe them together, as we have already said. And because active derivative is only used in the claims where the Markush group of beta-alanine, amide of beta-alanine and ester of beta-alanine, that Markush group and that active derivative should be construed together.

The defendants have the belief that the term beta-alanine should be beta-alanine, dipeptide, oligopeptide or polypeptide. We call that ADOP. So when I refer to ADOP, what I am trying to say is, all four of them together, which is what the defendants are saying that the term beta-alanine means.

Now, we find that there is strong evidence for what the inventors meant and for what the examiner understood in a petition to make special that was found in the very first patent that was in this family. In the petition to make special, it's necessary that you not only explain the prior art, but you explain why that prior art does not stop the patentability of your claims. That's what is required by the Patent Office for a petition to make special.

Now, the inventors made clear that when they referred to beta-alanine or L-histidine in the claims, that they meant the individual amino acids.

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If I can show you, this is found at JA73, and it is from the petition to make special in that the applicants, the inventors said something very interesting. They are talking about the references --

THE COURT: Could you blow that up a little bit, counsel.

MR. CHAMBERS: I will certainly try.

THE COURT: These are backup glasses. I lost my originals.

MR. CHAMBERS: How about that. If I can get my left and right proper, I will be fine.

They are talking about the prior art. They are talking about the Setra reference. They say it describes compositions containing the carnosine dipeptide that I showed us just a minute ago, and it uses that composition for treating muscle fatigue in athletic performance. It says carnosine is a dipeptide. Of course, right there is what the dipeptide would actually be called scientifically, beta-alanyl L-histidine.

According to the Setra invention, they say that dipeptides contain histidine, containing that ring structure that is on the histidine ring, so that's on the histidine

that I showed you, can be used for these benefits. And then, on the very next page, they say, "In contrast to the present invention, the compositions and methods described in Setra's invention teach dipeptides."

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Well, that, we believe, means that the present invention does not include dipeptides. I don't see any other way you could read that.

Now, it goes on to say -- so we have got a disclaimer at Part 1, where they say, In contrast to the present invention. Now in the next sentence, it says, "In the present invention," then it uses those terms that we are going to be fighting over, beta-alanine and L-histidine, "are administered to regulate hydronium ions." And then it says, Setra does not teach or suggest or mention using monopeptides for the treatment of hydronium ions. We believe that monopeptide is referring to the two monopeptides that are set forth right above that.

That is a second time they disclaim the idea that the term beta-alanine and L-histidine is really ADOP.

If you look at the bottom, you find that Harris, et al., also described the effect of using dipeptides. Then they define what the dipeptides are, carnosine and anserine on the hydronium ion concentrations in muscle.

Then it distinguishes Harris from their invention by saying, Harris neither teaches nor suggests the

use of beta-alanine or L-histidine, i.e., that is, monopeptides in the regulation. They are showing that in their invention we are using the monopeptides. In Harris, they were using the dipeptides.

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So the first statement, where it says Harris described the effect of dipeptides on hydronium ion concentrations in muscle, they are distinguishing it yet a third time, disclaiming that theirs is the same thing. And then in the fourth position, when they say i.e., monopeptides, they are saying, we are defining alanine and histidine as monopeptides.

You also find on that same page, when they are talking about the histidine reference, they are talking once again, in histidine, of using beta-alanine and carnosine.

Carnosine is a dipeptide. So they are saying, we see a difference between beta-alanine and the dipeptide side. And then they are saying that the present invention teaches that the administration of beta-alanine, either alone or in combination with other factors, is useful in reducing hydronium ion concentration.

That is even an additional time.

What we find is that at least four times in that particular passage they have said that beta-alanine and L-histidine are the monopeptides, not the dipeptides. That petition goes on and says none of the references either

alone or in combination teach or suggest a method of regulating hydronium ion concentrations by administering beta-alanine to a human tissue.

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Your Honor, if beta-alanine really meant dipeptides, it's clear that the Setra reference, which is dealing with looking at dipeptides, would have invalidated any possible claims. So we don't believe that it is meant to include those dipeptides.

Once again, Your Honor, that means four times in four separate places on JA74 the applicants disclaimed the definition that defendants are now proposing. Setra, Harris, saying the beta-alanine an L-histidine are monopeptides in contrast to Setra, et cetera, and in the NS or i.e. for Harris.

Most importantly, the Court has to consider how the claims of the patent could issue covering dipeptides with Setra and Harris there. The prior art would explicitly and inherently anticipate the invention. So it is not clear how the examiner could have been construing the claims in the way that defendants now claim.

If you look at JX-9, Exhibit 9, at JA96 through 97, that is the Setra patent application. And that Setra patent application shows a couple things. It shows that they are using the dipeptides and it shows in the claim, Claim 5 of Setra, that they are using it for muscle fatigue,

which is exactly what the patents in suit are dealing with.

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Table 4 in the patents in suit, which is found in Exhibit 3, Column 11, separately considers beta-alanine and the dipeptide, indicating that beta-alanine for the inventors was something different than the dipeptide. You can see in the bottom, where they are talking about beta-alanine, beta-alanine, beta-alanine, beta-alanine. And then over here they talk about carnosine, indicating that they saw beta-alanine as something different than the dipeptide carnosine.

Now, in describing the different embodiments of the invention, the specification says that beta-alanine can be provided as an amino acid or as a component of dipeptides, oligopeptides or polypeptides. It doesn't say that beta-alanine is. But it is a component. And it indicates that the amino acids are something very different than the dipeptides.

This is also true for the claims.

Considering Claims 1 through 4 of the '098

patent, which is at Exhibit 2 of the joint appendix at 43,

here the applicants specifically call for a peptide source,

including beta-alanine. Now, if beta-alanine means ADOP,

then it really makes no sense, because then the claim is

saying, a peptide source of polypeptides. That is not the

way scientists normally speak.

When the applicants call for beta-alanine, they mean the amino acid in these claims, and unless they clearly say something else, such as a peptide source, it should be construed as the amino acid.

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The specification also underscores the need to supply beta-alanine as an amino acid and not as a component of the dipeptide. We will talk about that a little later in the construction. And the examples disclosed in the specification show the preferred embodiments were the individual amino acids.

Now, active derivative is part of a larger element of the claim, which is, a composition comprising an amino acid or an active derivative thereof selected from the group consisting of beta-alanine, an ester of beta-alanine and an amide of beta-alanine. And you can see that on the exhibits, Exhibit 3, looking at Claims 5, 17 and 33.

The Court only needs to define active derivative in the context that it's used in the claim. An active derivative is defined in the patent as a compound derived from or a precursor of the substance that performs in the same or similar way in the body as the substance in the body.

Examples include esters and amides.

You can find that particular reference there at Column 2, Lines 46 through 50. The patent indicates -- I am

sorry, Exhibit 3, one of the patents in suit, shows that in Column 2, Lines 31 through 34, and also Column 5, Lines 11 through 14, what a precursor is. It talks about beta-alanine and L-histidine being precursors to the dipeptide, not the other way around. Because a claim term can't be construed in isolation, that is why it is necessary to put these particular items together.

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Basically, a precursor is something that comes before. If you think of the amino acids as building blocks for peptides and building blocks for proteins, then you can have the individual amino acids and they form the peptides. And they are precursors of the peptides. But you wouldn't normally say that the peptides are the precursors to the amino acid. And here is why.

Just like a brick, a brick is a precursor to a brick wall, you don't consider a brick wall as a precursor to a brick. You don't tear down a brick wall in order to make bricks. It's something entirely different.

Now, as I said before, defendants want this construction to have ADOP, amino acid dipeptide, oligopeptide and polypeptide, every time the word beta-alanine appears in the claims. The intrinsic record, however, shows what that term, an amino acid or active derivative from the group consisting of beta-alanine, an ester of beta-alanine, and an amide of beta-alanine, they

show what that means.

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The term active derivative is an active derivative of an amino acid and it's not an active derivative of the oligopeptide or polypeptide or the dipeptide. An amino acid is not a dipeptide, which is by definition two amino acid residues that are chemically bonded with a peptide bond between them.

I have already spoken that beta-alanine and L-histidine are precursors and it's not ADOP, as suggested by defendants. But in addition, the dipeptides of beta-alanine and L-histidine don't even perform in the same or similar way in the body as the individual amino acids.

And the patent sets forth that. That is important because active derivative, that is a key element of that. For example, the patents in suit say that the dipeptides help in the buffering capacity of the muscles during periods of sustained exercise, whereas the amino acids do not. That can be found at Exhibit 3, Column 2, Lines 1 through 23, Column 4, Line 66, through Column 5, Line 10. Also, the dipeptides have to be synthesized inside the muscle cell from the precursor amino acids, beta-alanine and L-histidine. That is at Column 5, Lines 11 through 29. The dipeptides don't fit within the meaning of an active derivative. And that is set forth in the patents in suit as well as the claims that you have.

Now, the term active derivative should be construed to mean a compound derived from or a precursor of the substance that performs in the same or similar way in the body as the substance or which is processed into the substance and placed into the body.

The term active derivative first appears in newly added claims. And the applicants set forth the support for these claims. Exhibit 5 at JA83 says that. When you are filing something in the Patent Office, you can't just file anything you want, any words you want. You have to say where the support for those terms are. So we can actually look for the support for those terms and see what they meant.

To support these newly added claims, the applicant pointed to Figures 3 through 6 and Example 1. And that is found, where they describe this, at Exhibit 5, JA83, but it is also found in Exhibits 1 through 3 because you can find Example 1 and you can also find Figures 3 to 6 where they describe them.

A review of those figures in Example 1 show that feeding studies that support the claim that you later find are feeding studies of the amino acid beta-alanine, but not feeding studies dealing with the dipeptide, the oligopeptide or the polypeptide.

Now, if this term really meant ADOP, as

defendants would have us believe, then the applicants would have needed to show support for feeding the dipeptide, support for feeding the oligopeptides, and support for feeding the polypeptides in order to get the effect that you find in the claims.

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In addition, the word beta-alanine, if the word beta-alanine really meant ADOP, then where are those beta-alanine esters and where are those beta-alanine amides of the dipeptides?

They are not in the specification. The specification is silent on amides and esters that are dipeptides. Where are the beta-alanine esters and beta-alanine amides of the oligopeptides, and where are the beta-alanine esters and beta-alanine amides of the polypeptides in the specification? There are none.

Now, there is no place in the specification that describes any polypeptide ester, a beta-alanine, or any oligopeptide ester of beta-alanine or even any dipeptide esters of beta-alanine.

There is a reason for that.

Remember that slide that we saw earlier. This is what the dipeptide looks like. This is what the beta-alanine looks like. And this is what the ester looks like.

You can see that the ester has an oxygen bond

here, whereas the dipeptide has a nitrogen bond. You are going to have to destroy the beta-alanine dipeptide in order to have an ester. You wouldn't have a dipeptide anymore. So we don't believe that this term includes esters of the dipeptides, esters of the oligopeptides, and esters of the polypeptides, because there doesn't seem to be support in the specification as filed.

L-histidine is another amino acid that is important in this invention. For the same reasons described previously for beta-alanine, we think it should be held to be the same. For that reason, we believe that the constructions that we have provided, that we talked about earlier, should be the constructions that the Court adopts.

And it's my understanding that the way you wanted to do this is that the defendants would now go forward with their analysis, and then we will come back to dietary supplement.

THE COURT: That is what the parties agreed upon. Right? Term by term?

MR. CHAMBERS: Yes.

THE COURT: We grouped the first ones.

MR. CHAMBERS: Yes. Thank you.

MR. HANSEN: May I approach, Your Honor, and give you a copy?

THE COURT: Yes.

MR. HANSEN: May I proceed?

2 THE COURT: Yes.

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MR. HANSEN: Thank you, Your Honor.

As we said, I am going to present a brief tutorial before Mr. DiGiovanni takes the lead argument on the terms that we are addressing now.

This is the first slide. What we want to do
here is accomplish two things for the Court. Some of this
will look a little similar to what plaintiffs presented but
the emphasis is going to be different. We want to
graphically show the structures of some of these compounds
to give the Court an idea of the similarities and
dissimilarities between the compounds in a visual way, since
that's not done if the patent.

The other thing we wanted to do was to discuss the metabolic pathway by which these materials, be it the dipeptide form of beta-alanine or the single amino acid form of beta-alanine, are processed in the body, because one issue that is going to be of particular importance in construing these claims and understanding what a portion of the specification is talking about is being sure that the Court is aware of where we are in the metabolic process.

The reason I say that is because some of the claim limitations speak to certain compounds at a certain location, for example, in the blood or blood plasma, or in

the muscle tissue, or at the point of initial delivery. And what the patent teaches about whether a single peptide or a dipeptide is used depends largely on where we are in the metabolic process. So we thought that might be helpful.

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So here we are. These are two main single amino acid forms of the key compounds in these claims, beta-alanine and L-histidine, both of which are naturally occurring amino acids.

By way of explanation, this term amino acid, we thought we would explain what we are talking about when we use that, since it's a large category, actually, of compounds in nature. Amino acids are defined by an acid group here, which has a carbon, doubly bonded to an oxygen, and then a hydroxyl group, which is an oxygen bonded to a hydrogen. That is the acid part of the amino acid.

If you look, you can see beta-alanine has one of those and L-histidine on the right also has one of those.

The other defining feature of an amino acid is an amine group. That is a nitrogen bonded to two hydrogens. You can see that beta-alanine has one here and L-histidine has one here.

So these are the defining features that make these two compounds amino acids.

All right. So we are obviously going to hear a little bit about carnosine today, and we already have.

Carnosine is a dipeptide. You can see that the structures of beta-alanine and L-histidine are preserved in the dipeptide save for one location, that location is right here. When these two molecules bond, the hydroxyl group that was present here is lost and this carbon bonds to the amine group here. And what happens is you give off a water molecule.

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But you can see that the identities of these molecules are preserved. So this molecule can then be reverse-broken-down to provide the single amino acid.

Also, one thing to be mindful of, you will see in the patents there is a tendency to jump between common names and the formal chemical names. So carnosine will sometimes be referred to as beta-alanyl L-histidine.

In the patents, the goal is to produce more of this beta-alanyl L-histidine in the muscle tissue. That is the ultimate goal that produces this hydronium ion regulation effect.

The patents also speak of other dipeptide forms of beta-alanine. One of them is called anserine, that is here. The formal name is beta-alanyl L-1-methylhistidine. We can see again that the structure of beta-alanine is preserved, save for this peptide bond, one location. And the histidine structure is present here as well, except there is this little extra group here, a carbon and three

hydrogens, that is called a methyl group. Sometimes you will hear anserine referred to as including a methylated analog of histidine, and that refers simple to the fact that there is this methyl group sticking out on the histidine molecule.

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Similarly, we have balenine down here. Again, here is the beta-alanine component, just a single peptide bond between the two molecules. Again, this is a methylated analog of histidine, so it has this CH-3 group, carbon and three hydrogens sticking out.

Also, one thing to note here is that even after the dipeptide is formed, it still retains the essential features of an amino acid. So if we look at anserine, here is an amine group, here is the acid group. If we look at balenine, here is the acid group, here is the amine group.

What does that mean? That means these molecules can continue linking to other amino acids and that's how you get an oligopeptide or a polypeptide, by that continual linkage. When you hear about proteins, proteins are very long chains of these types of amino acids.

With this background in mind, let's talk a little bit about the metabolic pathway. We thought it might be helpful to have a little illustration of it.

In this example, we are just talking about ingestion. But the patent goes into other methods of

delivery.

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A person, it is taught in the patents, can ingest beta-alanine in its single amino acid form or in its dipeptide form. I realize the parties are arguing about what beta-alanine means. At this level of teaching it is in the patent and it was in the Setra patent that plaintiffs' counsel discussed.

Okay. If carnosine is ingested, what happens is in the digestive tract it is broken down into the constituent amino acids. Here is the beta-alanine, two of the constituents single have to form, here is the beta-alanine and here is the L-histidine. That is what happens in the blood. There is actually, in one of the examples, Example 2 in the patents, where they actually used carnosine, when they tested the blood, the carnosine was gone in the blood. What was left was just a single amino acid form. So there is a conversion process that takes place when you ingest carnosine. But at the blood, it is a single amino acid form.

The next part of the metabolic pathway that is taught in the patents is to, in the muscle tissue, then, synthesize carnosine by recombining the beta-alanine and the L-histidine.

So again, as this is intended to illustrate, we have really three key locations to consider when we are

1 talking about what chemicals are at issue in the metabolic 2 pathway. Are we at the point of ingestion? Are we in the blood or blood plasma? Or are we in the muscle tissue? 3 4 It helps to have an illustration like this to 5 try to keep those issues straight. Unless the Court has any questions about this, I 6 7 will defer to Mr. DiGiovanni for the argument. THE COURT: Thank you, counsel. 8 9 MR. DiGIOVANNI: Your Honor, may I approach the 10 easel? 11 THE COURT: Sure. 12 MR. DiGIOVANNI: Thank you. 1.3 Can Your Honor read this? 14 THE COURT: Yes, I can. 15 MR. DiGIOVANNI: Okay. Terrific. Thank you, 16 Your Honor. 17 So the first terms we are going to address are beta-alanine and L-histidine, and immediately after that I 18 19 will address active derivative. 20 So with regard to beta-alanine and L-histidine, 21 these are terms that were expressly defined by the inventors 22 in the patents. And what we did not see was the definition 2.3 that was attributed to these terms by the inventors in the 24 earlier presentation. But I am going to certainly address

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that.

What I have done is, on the easel, I have the two parties', the plaintiffs' and defendants' constructions that we will be referring to. And plaintiffs' construction is on the right-hand side, and defendants' construction is a little bit different than how it was characterized earlier.

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What defendants are arguing, and based on the inventors' definitions, is that beta-alanine means beta-alanine in the form of the individual amino acid or as a component of the dipeptide, such as carnosine or an oligopeptide or a polypeptide or an active derivative thereof.

The L-histidine definition is very similar, just as the inventors set forth. That is, L-histidine means L-histidine in the form of the individual amino acid by itself, or as a component of a dipeptide, or an oligopeptide or a polypeptide.

So what I think we heard in the earlier presentation from plaintiffs is that defendants contend that beta-alanine means the entire dipeptide. That is not what is being contended. Beta-alanine means the beta-alanine, either in the individual form or as a component of the dipeptide, as we saw in the technology tutorial.

So, Your Honor, these slides, I am going to skip a few that would be redundant after the plaintiffs' presentation. Just as a little bit of background.

Representative Claims 32 and 33 just show how beta-alanine and L-histidine are used in the claims. 32 says a human dietary supplement comprising beta-alanine and L-histidine.

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So the issue to be addressed here is, well, what did the applicants mean when they said beta-alanine? And what did they mean when they said L-histidine?

This next slide, Your Honor, is a direct quote in the box there from the '361 patent. The three patents in suit have the same specification, so it's in all the patents in suit.

What the inventors said in their application, and I will read the highlighted portion, they say, Each of the beta-alanine or L-histidine can be the individual amino acids or components of dipeptides, oligopeptides or polypeptides.

That is, Your Honor, directly quoted in defendants' construction.

The plaintiffs, on the other hand, are seeking to contravene that construction. In fact, seeking to directly contravene the inventors' definitions by, in fact, striking out or removing something the inventors expressly said. The inventors expressly said that L-histidine and beta-alanine can be components of dipeptides. And what we are seeing is plaintiffs are seeking to avoid that, even though it was a direct statement by the inventors.

So what's important about this slide and the definition is, of course, the inventors are acting as their own lexicographers, as they are allowed to do. And, in fact, under Phillips, as Your Honor knows, the Federal Circuit says that the inventors' lexicography governs.

Now, below that quotation is just a couple of bullet points summarizing sort of the importance of the definition of the inventors. Number one, it refers to beta-alanine and L-histidine in either the individual amino acid form or as components of dipeptides, oligopeptides or polypeptides. And number two, as highlighted in green in that definition, the beta-alanine or L-histidine can be active derivatives.

So if you take the highlighted portion in both yellow and green, that is exactly defendants' claim construction proposal in this case. It is directly from the patent. So the fact that there is a definition was admitted by plaintiffs. They conceded that in their opening brief. The plaintiffs state, this is a quote from their opening brief, they talk about what the inventors were stating, and they say, as they did in their argument, they immediately went to the prosecution history to say that it modifies the definition of beta-alanine and L-histidine in the specification.

So there appears to be no dispute, there was no

dispute, Your Honor, in the opening brief that, in fact, there was a definition set forth. I believe in the answering brief they tried to step back from that a bit and say there were multiple definitions in the patent specification. They mentioned that actually in their opening brief and again in their answering brief. But taking a look at the inventors' definitions, there are no multiple definitions set forth in there. There is a single definition of beta-alanine and L-histidine, and that's what defendants have adopted as their proposed constructions in this case.

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Moving away from the express definition of the inventors and looking at the remainder of the patent specification, which again is the same in all three patents, the background of the invention section is quoted in this slide. And here, the inventors state, Dipeptides of beta-alanine and L-histidine and their methylated analogs include carnosine, anserine, balenine. Here the inventors are expressing their view that is consistent with their definition that, in fact, beta-alanine is part of a dipeptide and is part of carnosine.

They are not saying that carnosine includes some sort of residue that you would consider not beta-alanine.

Here they are calling it beta-alanine. They are using the term beta-alanine to mean a portion of the dipeptide.

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Here is a similar statement made by the inventors in the context of Example 2 in the patents, where the phrase beta-alanine is used by the inventors, in the parentheses, they say, "(e.g., in the form of anserine and carnosine.)

Once again, the inventors are expressing their clear view that was set forth in their definition that, in fact, beta-alanine can exist in the form of a component of carnosine. In other words, beta-alanine is not limited solely to the individual amino acid, because when you have carnosine you have a beta-alanine component of that molecule.

Once again, here is Table 4, summarizing some experiments, an absorption study that was performed by the inventors. They used as some of their test material not only beta-alanine, the individual amino acid, but they also used carnosine and they also used a chicken broth. And for both carnosine and chicken broth, the inventors referenced that as having beta-alanine.

That was the specification, Your Honor.

I am going to move to the claims, in fact, most specifically, the claims of the '361 patent, to see how the inventors used the term beta-alanine and L-histidine.

Now, what's quoted here are Claims 1 and 3 of the '361 patent.

Here we have Claim 1, which is a fairly general claim, stating, claiming a composition comprising a mixture of creatine and a composition comprising an amino acid or active derivative thereof selected from the group consisting of beta-alanine, an ester of beta-alanine, and an amide of beta-alanine.

Now, Claim 3 is critical. In Claim 3, a dependent claim, the inventors claimed a composition of Claim 1 wherein the beta-alanine further comprises a dipeptide, an oligopeptide or a polypeptide.

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So in Claim 3, Your Honor, of the '361 patent, there is an express use of the term beta-alanine that must include beta-alanine as a component of a dipeptide or a polypeptide or an oligopeptide.

The definition proposed by plaintiffs just doesn't fit in this claim. It would not work. I have a couple of slides that follow that explain.

This next series of slides explains the dilemma that is posed to plaintiffs due to Claim 3, and perhaps that's why we haven't heard anything about Claim 3 yet, Your Honor. What we see in Claim 3 is the use of beta-alanine -- let me just back up.

In Claim 1, beta-alanine has its definition as expressed by the inventors. So that means it can be either the individual amino acid or a component of a dipeptide.

Then Claim 3 narrows Claim 1 and expresses that
their beta-alanine further comprises a dipeptide, an
oligopeptide or a polypeptide. And this Claim 3 only makes
sense if the inventors' definition of beta-alanine is
adopted, which is the same definition that is being offered

Plaintiffs' doesn't work.

by defendants.

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So in the bottom left here, under defendants' construction of beta-alanine, Claim 1 means that beta-alanine can exist in the individual form or as a component of a dipeptide. And Claim 3 narrows the claim and specifies that the beta-alanine of that claim exists as a component of the dipeptide, or the oligopeptide or the polypeptide.

Let me go over to the bottom right, using plaintiffs' construction. So if you adopt plaintiffs' construction, Claim 1, or any time you use beta-alanine precludes the beta-alanine from existing in the form of a component of the dipeptide. Now you go to Claim 3 under plaintiffs' construction, there is no way to reconcile Claim 3 under plaintiffs' claim construction, because their construction mandates that the beta-alanine exists by itself as an individual amino acid.

So you can't have a situation where the beta-alanine further comprises a dipeptide, oligopeptide or

polypeptide.

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So, again, on this Claim 3 dilemma of plaintiffs, if you adopt their claim construction -- and this is an exercise where I placed in their construction in brackets in Claim 3, where the term beta-alanine existed -- it's the composition of Claim 1 wherein the individual amino acid, beta-alanine, or its salt, ester, or amide, further comprises a dipeptide, an oligopeptide or a polypeptide.

It's a complete impossible and nonsensical claim, because if the beta-alanine further comprises the dipeptide, it would no longer be an individual amino acid, and therefore it would no longer be beta-alanine. It collapses upon itself, Your Honor. It can't be read using their construction.

So Claim 3 is irreconcilably inconsistent with their construction.

Then the final slide on this summarizes that there are essentially three problems that plaintiffs encounter due to Claim 3 and due to their construction that is different than the inventors' definition. That is, number one, the construction is directly inconsistent with Claim 3's requirement that the beta-alanine exists as a component of dipeptide. No. 2, Claim 3 -- by the way, Claim 3 isn't the only claim that adopts that language. There is also Claims 12 and 24 that also require that the

beta-alanine further comprises a dipeptide, an oligopeptide or polypeptide.

Point 2 is Claim 3, 12 and 24 are rendered nonsensical, contrary to Federal Circuit law.

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And also, Claim 3, which is a dependent claim on Claim 1, under defendants', under our construction, it narrows Claim 1. Under plaintiffs' construction, it does not narrow -- if it can be read to make any sense, which I don't think it can, it certainly would not narrow Claim 1.

One additional point is, Claim 3 of the '361 patent, and Claims 12 and 24, they were added during the prosecution of the '361 patent. The petition to make special in the prosecution history we heard quite a bit about. That was in the prosecution of the '596 patent, which was an earlier patent. The '361 patent application was filed later. And during the '361 patent application, the inventors proposed to the Patent Office these new claims, Claim 3 that I just talked about quite a bit, and Claims 12 and 24. When they did that, as Mr. Chambers said, typically, support is described for those new claims. what the inventors did in this case, when they adopted this new Claim 3, 12 and 24, when they proposed it to the Patent Office, they said, support for these new claims directed to a composition where beta-alanine further comprises a dipeptide, an oligopeptide or a polypeptide can be found,

inter alia, on Page 3, Line 28 to Page 4, Line 2.

That passage, that is the inventors' definition in the original patent application and in the patent as issued of beta-alanine and L-histidine, which is the proposed construction that defendants are making.

Even after this petition to make special in the prosecution history, the inventors proposed this Claim 3 and re-incorporated this definition of beta-alanine, that would allow beta-alanine to exist as either the individual amino acid or as the component of a dipeptide or a polypeptide or an oligopeptide.

THE COURT: Mr. DiGiovanni, are we, with these claim terms, are we in that portion of the parties' arguments over disclaimer and/or lexicography? Two different concepts. I think the defendants assert they acted as their own lexicographers, which they are entitled to do, and this is how they define the term, you offer this as further support for that.

Genentech is cited by both parties, one as being apposite and the other, you, being inapposite. So is it the defendants' position that this Court should say, you acted as your own lexicographer and you are stuck with the definitions that you gave to the PTO? Or am I misperceiving the argument?

MR. DiGIOVANNI: No, Your Honor. We are saying

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that the inventors proposed a definition and that definition should govern.

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I will address in just a moment the petition to make special in the prosecution history. What our position is, we recognize the prosecution history. We understand that they made some statements. However, it was not clear, it was not unmistakable. And the prosecution history as a whole does not overcome the definition in the patent and especially since, in these particular patents, patent claims of the '361 application that we just looked at, they referred back to that original definition, after this prosecution history.

That is all part of the prosecution history.

THE COURT: So, then, you would say that this portion of Genentech, that I should apply it as you suggest, I am quoting from the case, where the Federal Circuit wrote, I guess this is at, probably at Page 1564, I think.

Headnote -- I have the West version, Headnote 6, I think it is, in discussing the prosecution history, the Court wrote, "An appropriate method for resolving the issue is to avoid those definitions upon which the PTO could not reasonably have relied when it issued the patent."

That's the tool that I am told to utilize, is it not, when issues of this type arise? Do I need to get into that? Go ahead.

MR. DiGIOVANNI: I would say, Your Honor, that, Genentech may apply.

THE COURT: I am not sure.

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MR. DiGIOVANNI: I am saying, in a situation where there is a definition that makes no sense in the context of the patent claims, perhaps <u>Genentech</u> would apply. Here, it's actually the opposite. It's the definition that's being proposed by plaintiffs that can't be reconciled with the patent claims that must be rejected.

So this is a brief timeline. I am not going to go through this. This just indicates, Your Honor, in the bottom left, the petition to make special was filed in March of 1999. The '361 patent was filed in early -- January 9th, 2001, so when they reincorporated that definition, after this petition to make special, it was a year and a half to two years after that.

So the petition to make special, Your Honor anticipated I was going to address this next, the petition to make special that was filed in the '596 prosecution history is not a disclaimer of the scope of the term beta-alanine or L-histidine, for three reasons that I will detail in the following slides.

Number one, it is not a clear and unmistakable disavowal, which is what is required, as Your Honor knows.

No. 2, the prosecution history as a whole

indicates that it is not a disclaimer. The Federal Circuit instructs that one is not to look at specific items in the prosecution history without looking at the entirety.

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And No. 3, the prosecution history of later applications indicates very clearly that the applicants did not disclaim beta-alanine as components of dipeptides or polypeptides.

So number one, the petition to make special is not a disclaimer.

A portion of the petition to make special that was not referenced in Mr. Chambers's presentation appears at Page 3 in joint appendix Exhibit 4. There the applicants state that the methods of the present invention include providing the dipeptides, peptides, or peptide analogs by any number of means, including, for example, ingestion or injection.

So this is an indication that, in fact, the applicants did not disclaim, as is claimed by plaintiffs, dipeptides in the invention to beta-alanine as components of the dipeptides.

The portion of the petition to make special that was cited by plaintiffs in their presentation is not a clear and unmistakable disavowal. In it the applicants described the Setra prior art reference, and, Your Honor, at most, the applicants stated that Setra did not recognize the role of

beta-alanine or L-histidine either in the individual form or the form components of the dipeptides.

So the focus, in other words, that the applicants were pointing their finger at Setra and saying, well, they didn't focus on the individual amino acids either by themselves or as part of the dipeptides. Setra instead just focused on the entire dipeptide.

So the statements that are made, then, in the petition to make special, especially considering the fact that there was an express definition in the patent application of beta-alanine and L-histidine, that clearly and expressly allowed beta-alanine to exist in the form of a component of dipeptide, the statements that are made in the petition to make special don't rise to the level of being a clear and unmistakable disavowal of claim scope.

The next slide just is a cite to a case. I will move on from that. I will move on, Your Honor. I am sorry.

The $\underline{\rm 3M}$ case says that when the patentee has expressly defined a term in the specification, that the definition would control over broad remarks during prosecution.

So this next slide makes the statement or follows up on my earlier bullet point that the prosecution history as a whole indicates there is no disclaimer.

So what do we look at when we look at the

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prosecution history as a whole? Sure, we do look at the petition to make special. We need to look at the entirety of it, including the earlier portion of it that I cited, which makes express reference to dipeptides. But you also have to look at the '361 prosecution history, where the applicants claimed the beta-alanine as part of the dipeptide in Claims 3, 12 and 24, and then as I stated earlier, when they did that they reincorporated that general definition, even after the petition to make special.

Now, the prosecution of later patent applications also shows no disclaimer. The broad statement that was made by plaintiffs in their --

MR. CHAMBERS: Your Honor, are we going to go into extrinsic evidence at this point? It appears that we are.

MR. DiGIOVANNI: Your Honor, whether subsequent patent applications are extrinsic or intrinsic, I don't believe there has been a definitive ruling on whether they are or not. I can't conclusively say this is extrinsic evidence, Your Honor. This is the subsequent prosecution history.

THE COURT: I think the point made earlier by Mr. Chambers was his view is unless it's from the same family --

MR. CHAMBERS: That is correct.

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THE COURT: -- it would be appropriately viewed to be extrinsic. Why would you disagree with that?

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MR. DiGIOVANNI: This is the same family.

THE COURT: This is from the same family.

MR. DiGIOVANNI: So what we have here is the '084 patent, which is a continuation-in-part application from the same patent family. The broad statement made by plaintiffs is that based on this statement in the petition to make special that the applicants disclaimed dipeptides. And they say that throughout their briefs.

In fact, they said it earlier today.

When they filed this continuation-in-part application in the '084 patent, they once again used that definition. In fact, they actually beefed it up a bit to make it more clear that in fact beta-alanine can exist as a component of carnosine. They added the parenthetical (e.g., carnosine, anserine and balenine) four lines into that definition.

So same patent family, they once again made clear that beta-alanine can be included or can exist as a component of a dipeptide or a polypeptide or an oligopeptide.

Here are the claims of that very same '084 patent in the same patent family. What is claimed? Number 9: A dietary supplement comprising a mixture of creatine

and anserine or balenine. Well, anserine and balenine are dipeptides. So they haven't disclaimed dipeptides. To take the petition to make special to mean that they disclaimed dipeptides, that can't be the case because neither the examiner, same examiner, nor the applicants, same applicants, treated it as a disclaimer. And that's evident in the prosecution history.

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This is the final of the related subsequent patent applications. This is the '294 patent that issued, filed in 2002, issued in 2004. This is an actual continuation, a straight continuation. So it has the same specification, including that same definition that I have cited to a number of times.

What is claimed in this patent? It is a method of increasing the anaerobic working capacity of a tissue in a subject, similar language that we see in the patents in suit, comprising the following steps. Well, providing a methylated analog of an amino acid selected from a group consisting of carnosine, anserine and balenine.

Again, there was no disclaimer of dipeptides.

The applicants didn't disclaim it. In fact, they went ahead and claimed it like gangbusters afterwards, and the examiner allowed it.

So the examiner didn't understand there was a disclaimer, and the applicants didn't even treat it as a

disclaimer.

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Your Honor, telling is this slide. It is one of the transition slides here. Plaintiffs essentially admit that there is no disclaimer. In their opening brief, they make a very general, very broad statement that the statements by the applicants during the prosecution was a clear and unmistakable disavowal that the applicants' invention encompassed dipeptides such as carnosine that were disclosed and claimed in the Setra reference.

They are trying to say there was a disavowal, no claim of dipeptides. Here is what they say in their answering brief down at the bottom. They say, The prosecution history evidences a clear disavowal that any term in the patents in suit encompass dipeptides, such as carnosine or anserine, unless the claim explicitly states dipeptide, anserine, or the like.

Recognizing this dilemma that appears due to

Claim 3, and recognizing the strength of the definition and

the fact that it was reincorporated and the fact that the

subsequent prosecution history that we put in our opening

brief, they try to have it both ways here, Your Honor.

They say there was a disavowal. Well, unless we say there wasn't, you can't do that. Either there was a disavowal or there wasn't. Very clearly -- I won't say very clearly. We believe it is very clear that there was no

1 disavowal.

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THE COURT: Somebody taught you Appellate

Advocacy well when they say don't say "very clearly."

MR. DiGIOVANNI: Yes.

So I do have some slides on extrinsic evidence.

THE COURT: We can skip by these. I was looking at them.

MR. DiGIOVANNI: It was only meant to be definitional. I will skip them. We cited them in their briefs.

THE COURT: We are going to active derivative. Right?

MR. DiGIOVANNI: I have one additional point on beta-alanine and L-histidine. And that is an argument that was made in the brief, in the opening brief and I think the answering brief for plaintiffs.

They make their arguments and then they fall back on the argument, well, the Court needs to construe the claim to preserve the validity. We think that maxim, which does have some application but very limited, as Your Honor knows, due to Phillips and other cases, we think it doesn't. In fact, their argument to apply that maxim is faulty, it has four faulty premises. I will go through them, Your Honor.

Number one, that maxim is only applied when the

claim term is ambiguous. And even then it is still limited even in that context. Your Honor, we would propose or suggest that the claim term is not ambiguous. It is expressly defined in there.

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To the extent that there is some ambiguity in the prosecution history statements, that doesn't go to the ambiguity of the claims. That goes to whether those statements act as a disclaimer. And that needs to be clear and unmistakable.

So you have ambiguous statements at best. Is that a clear and unmistakable disclaimer? No. Then you go to the patent definition, which is very clear. So you never get to the ambiguity that would be required for this maxim.

Number two, there are some lesser known Federal Circuit cases. I hesitate to say that --

THE COURT: No, it's okay.

MR. DiGIOVANNI: -- that say this maxim is also never applied. You can't apply it if the alternative proposed construction is not practicable.

So these cases, <u>Generation Two</u> and <u>Rhine</u>, say, the <u>Rhine</u> case says, "The Court has consistently limited the axiom to cases where the construction is practicable."

So you need to take a look at the proposed construction and say, well, does it work just as a threshold matter? As we say in Claim 3, their construction doesn't

work. It makes an unpracticable claim, Claim 3. So you can't apply this maxim.

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No. 3, I guess it's a basic principle of the argument that when someone says please construe the claim to preserve the validity as well as the construction ought to actually preserve the validity. In this case it does not, at least Claims 3, 12 and 24. Those are the only claims we identified based on their construction that would be just flat-out nonsensical and inoperative.

But I think we can also say that we probably have an enablement problem and an indefiniteness problem if we adopt their construction, which is internally inconsistent with Claims 3, 12 and 24 of the '361 patent.

And the fourth of the four faulty premises of their argument that the Court ought to construe the claim to preserve the validity is that the examiner -- they make this argument I think it's at Page 20 of their opening brief, they argue that the examiner recognized that dipeptides were disclaimed by the applicants. I just want to summarize that in fact the examiner did not. He allowed Claims 3, 12 and 24, which he would not have allowed if he recognized that in fact dipeptides were disclaimed. The applicant in the Patent Office allowed carnosine claims in the '294 patent, which is a subsequent patent in the family, and he allowed anserine and balenine claims, also dipeptides claims, in the

'084 patent.

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So the argument made by plaintiffs that the examiner recognized that dipeptides were disclaimed is just faulty.

Your Honor, my next slides deal with active derivative. So I am going to switch gears just a little bit here.

THE COURT: Okay.

MR. DiGIOVANNI: I have separate slides for active derivative, Your Honor. But I will keep my definition up on the easel.

THE COURT: I have it in front of me as well.

MR. DiGIOVANNI: That is fine. I don't have an easel definition of active derivative. So that's great. Terrific.

So just taking a look at the parties' dueling proposals, they are identical up to a point. So both parties agree that the first part of the definition should apply. That is, compounds derived from or a precursor of the substance that performs in the same or similar way in the body as the substance or which is processed into the substance and placed into the body.

The difference between the two, and I highlighted it in red in this slide, in the right side, plaintiffs add a kicker at the end. They say, okay, they

ask the Court to add something at the end of that definition that excludes dipeptides, oligopeptides and polypeptides.

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So I am going to skip this, Your Honor. I think that was covered.

Where are both parties getting their definition from? Well, they are both getting it from the definition that the applicants, the inventors, set forth in their patent. Defendants' proposed construction is verbatim, word for word, the definition that was set forth by the inventors. It's a clear, unambiguous definition. So it's a specific definition that is adopted verbatim by the defendants.

Now the case law says the patentee's definition controls. So where do the plaintiffs get this kicker from? I call it a validity kicker because their argument for it at their opening brief at 16 essentially is stating, okay, there is a definition, they acknowledge there is a definition in the patent, but they say -- and it's the lowest of these four yellow highlights -- but they say, well, certain things do not fit within the meaning of the active derivative that is set forth in the patent in suit. Therefore, they want to include that in the definition.

Well, Your Honor, I would say that that is not the role of claim construction. The claim construction is to determine the -- this is from their brief, this is their own words -- claim construction is, of course, to determine the meaning of active derivative. Whether something fits within the meaning of it, that's not claim construction. That is something that needs to be determined by the fact-finder, either at summary judgment or trial or otherwise.

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But that is not claim construction. Claim construction is figuring out the meaning of a term.

That is what defendants have done. The meaning is expressly stated by the inventors.

Another important point here, Your Honor, is that the term -- this is what I was alluding to earlier when I advocated for the active derivative to be addressed separately. That is, the term active derivative never appeared in the claims until the '361 patent. And Mr. Chambers acknowledged that.

That is why we didn't want to get that tied up with this prosecution argument that was made in the earlier patent, because the claim term active derivative never appeared in the claims until the '361 patent. And the Federal Circuit case law says the doctrine of disclaimer doesn't apply when the claim term in the descendant patent uses different language.

I just wanted to make that emphasis.

Your Honor, with that, that's what I have on

those terms.

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THE COURT: Thank you, Mr. DiGiovanni.

MR. HANSEN: Your Honor, may I supplement a couple points on behalf of DNP?

THE COURT: Yes. Mr. Hansen.

MR. HANSEN: Thank you, Your Honor.

I want to address a couple of points from the plaintiffs' presentation specifically.

One point that was made a couple of times is that, well, once you have the dipeptide you no longer have the amino acid. What you have are amino acid residues, and those aren't the same things as the amino acids. And that is actually scientific incorrect, is what I believe they said, to call the components of the dipeptide amino acids because they are in fact residues.

That may be all well and good. But the truth is it's the inventors who said that. If it is scientifically incorrect, it's based on what the inventors said.

Here on Slide 42 we have the portion of the specification, not the highlighted portion, but above it, it says, "Each of the beta-alanine or L-histidine can be components of dipeptides."

What it doesn't say is that beta-alanine residues and L-histidine residues can be components of dipeptides.

What we are really talking about here in the claim construction language is how is the language used.

The way the inventors used this language is to describe beta-alanine and L-histidine as components, not residues thereof. That is really what we are here about today, is to

figure out how those terms were used and what they mean.

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One thing I think we should do also is step back for a moment. We are in a slightly different situation here where the patent holder is saying, well, we described what the invention meant in our petition to make special. And it's somewhat odd because the patent holder was in the unique position to draft patent claims to explain exactly what they meant.

So it's a little odd to take one document filed in the late 1990s out of this whole series of patents and say that it now describes what the scope of the claims is.

I think that's something to keep in mind as the Court considers the parties' positions.

One other point I wanted to make. Plaintiffs' counsel talked about the analogy of an apple and that the apples lose their identity. Not really applicable here, for reasons that are actually stated in the patent. I want to show an excerpt from the '361 patent.

If we look here in Column 5, if we go down to Line 12, actually let's look at Line 11, the

1 beta-alanyl-L-histamine dipeptides --2 THE COURT: Would you blow that up a little bit. 3 The first paragraph there, Line 11. 4 MR. HANSEN: The beta-alanyl histimine dipeptide is synthesized within the body from beta-alanine and 5 These precursors can be generated within the 6 L-histidine. 7 body or are made available by the diet, including from the breakdown of an ingested beta-alanyl-histidine dipeptide. 8 9 That beta-alanyl-histidine dipeptide is carnosine, as we 10 described in the tutorial. 11 Actually, in this case if you eat the apple pie 12 you get the apples back in the bloodstream. So the apple 13 pie analogy is not really applicable here, as their own 14 teachings indicate. I wanted to point that out. One final point then, Your Honor. The Court 15 16 raised the issue of the Genentech case and whether there is 17 multiple definitions. We want to make clear that our 18 position is there are not multiple definitions. 19 THE COURT: I think that's why you 20 distinguished --21 MR. HANSEN: Exactly. Our position is it is a single definition which describes multiple forms in which --22 2.3 THE COURT: I was being inartful in my questions to Mr. DiGiovanni. I do understand him on that. 2.4

MR. HANSEN:

I wanted to clarify that point.

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Thank you, Your Honor.

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THE COURT: Mr. Chambers.

MR. CHAMBERS: Your Honor, I am afraid we are going to have to re-plow a little bit of ground because I consider later applications in the same family to be extrinsic evidence, and I didn't cover some of the other areas where they dealt with that.

The reason for that --

THE COURT: Let's make clear your position, because I thought when I was first discussing the whole notion of extrinsic evidence, I thought it was the plaintiffs' position that if the patents were from the same family you didn't consider it to be extrinsic. When you stood up to object and when that was pointed out by Mr. DiGiovanni that it was from the same family you didn't pursue the objection.

MR. CHAMBERS: Your Honor, exactly. I had thought that what we were saying was that something that came after the patent issued was extrinsic. And that's why I didn't put this into my stuff. That's why I was going to object. But then after he raised it and you made the point that, well, if it is from the same family we will let it in, I thought that there wasn't an issue. Part of the reason for this is that defendants in their brief indicated that there was a particular application that became a patent.

And they said it was in the same family. It's not in the same family. And we were ready to show that it wasn't in the same family.

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But that's not the application and the patent that they spoke about. That was a different one. You can find it in the brief and we can show why, even though it's on the front of the patent claiming to be in the same family, the prosecution history of that patent makes it clear --

THE COURT: But that's not this patent that -
MR. CHAMBERS: Exactly. I will re-plow a little

ground. First I want to cover that Claim 3 that was in the

'361 patent.

Claim 3 in the '361 is unusual because it doesn't say the way we often talk in patent law.

Usually in patent law, we will say something like it comprises, the invention comprises, or that the invention -- I will have to switch over. Let's just look at this particular Claim 1 here. We will blow it up.

The composition comprising a mixture of creatine composition comprising an amino acid, an active derivative of the beta-alanine, an ester of beta-alanine or amide of beta-alanine, that is Claim 1. That claim itself can issue. That claim was determined to be something that was patentable.

1 THE COURT: It's an independent claim. Right? 2 MR. CHAMBERS: Exactly. So if you add an 3 additional limitation to a dependent claim, you can get that 4 allowed. There was a suggestion or a statement that, well, they say here that they disclaimed dipeptides, but you find it in Claim 3. It's true you find it in Claim 3. You gain 6 7 the ability to get the patent in Claim 1, and then you add something further. In this particular claim construction, 8 9 in this particular claim, it doesn't say something that the 10 composition of Claim 1 wherein beta-alanine is a dipeptide. 11 It says where a composition further comprises, has addition 12 If you look at their particular -to it. 13 THE COURT: I get that point. 14 MR. CHAMBERS: Okay. When they substituted 15 in -- well, it's really saying that in addition to the 16 beta-alanine you have this dipeptide. 17 THE COURT: It's a term of art. I understand it well. 18 19 You also see that same MR. CHAMBERS: 20 construction there for Claim 2 further comprises 21 L-histidine. So it has something extra. 22 But look at Claim 4. It says the composition 2.3 where the creatine is creatine monohydrate.

So they knew how to make that narrowing

definition that you commonly find in patent law that leads

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to claim differentiation. This isn't claim differentiation in the same way. This is saying that for the first claim you claim the beta-alanine and then anything you want to put in beta-alanine is still in that big genus.

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For Claim 3 not only do you have to have beta-alanine, but you have got to also in addition to beta-alanine have to have a dipeptide and oligopeptide or polypeptide. On Page 44 of their presentation --

THE COURT: The citation to Phillips?

MR. CHAMBERS: -- where they substituted in the meaning of the term.

THE COURT: I am not sure where that is.

MR. CHAMBERS: I thought it was Page 44 of their prosecution --

THE COURT: You mean their slides?

MR. CHAMBERS: In any event, Your Honor, the examiner did not know did not misunderstand what a dipeptide was. The examiner knew exactly what a dipeptide was. It was saying that this was the dipeptide. Then further you had beta-alanine, but it was something in addition.

I am sorry, it was Page 17.

Here it says, The composition of Claim 1 wherein the individual amino acid beta-alanine or its salt ester or amide further comprises a dipeptide. All that is saying is that that particular composition further includes or has to

have in addition a dipeptide, an oligopeptide, or a polypeptide. That is all that that means.

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Now, they suggested that the disavowal is for all of the subject matter forever. And our position is that when you disavow something, you are disavowing the claim terms. You can go back and you can actually claim material that was another embodiment in the patent when you filed it. This patent has many embodiments. Some of those embodiments were dipeptides. And later patents actually claim those dipeptides.

But we are talking about what the claims in the patent in suit mean, not whether or not they have disclaimed something so that they can never resurrect it in a subsequent patent.

THE COURT: I am just curious. We don't get to make policy. What do -- I will get both of you up here -- what do you imagine the Federal Circuit and the Supreme Court, more importantly, perhaps the United States Congress, the framers of the Constitution intend patents, what is their option? It is to perform a public notice function -- right -- to those of skill in the art as to what the metes and bounds of a particular property claim are. Right?

So in analyzing that -- and <u>Vitronics</u> picks up on this and many other cases, <u>Phillips</u> certainly re-embodies and does not in any way diminish Vitronics, says to us

that -- and this has to do with extrinsic evidence, understanding that the prosecution history is part of the intrinsic record. Nonetheless, what do people skill of skill in the art typically do? Don't they read the claims and the written description to try to understand where the parameters are?

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How involved in the prosecution history, in analyzing the prosecution history, things like disclaimer, prosecution history estoppel, must one of skill in the art get in order to determine whether he or she can avoid the patent or design around or things that are appropriate to do?

MR. CHAMBERS: I think that the claims put someone on notice. As we all know from looking at opinions of counsel for freedom to operate opinions and things like that, the Federal Circuit has said that a freedom to operate opinion that does not include an investigation of the prosecution history is incompetent. And so what they are saying is, hey, the claims put you on notice. And then it's not like they said in years past that you should burn the file wrapper so that you only have those claims. You look at the claims, the specification, and then you ask, do I still have an issue? And if you do, then you are going to want to say, okay, I better have a trained professional look at this because otherwise, there might be an issue.

So I think, you know, Congress put this out.

And, yes, they want to advance science and the useful arts and they want to encourage patents. But they know that sometimes scientists don't always speak with the same language that is the vernacular for everyone else. So if you can get it from the specification, that is fine. But if there is any doubt, you better go to the prosecution history.

THE COURT: I certainly agree with you on that.

How could I not? But I worry a little bit for skilled artisans insofar as -- sure, go out and get a competent legal opinion. Get a good outfit to sit down. But even the best may not be able to anticipate the intricacies, the creativity of good advocates like yourself who come later on and say, We disclaimed.

It just seems to me to be a really slippery slope.

That is a discussion perhaps for a class of mine or another day.

Go ahead.

MR. CHAMBERS: Your Honor, I guess the issue really is, given what was said in that JA73 and 74, where they said that the beta-alanine and the L-histidine were monopeptides, they said that twice and then they distinguish it over the dipeptides, I don't see how for that particular

claim there can be any doubt that they were disclaiming it.

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Now let's look at Slide 18, Mr. McKeague, and also your Exhibits B and C.

In patent law we all know you can't get a second patent if you have already gotten a patent for the first thing, unless you file a terminal disclaimer. It's called double patenting. In a later filed application, not one of the patents in suit but within the same family, it was a CIP, and it's the one we have been speaking about, in those particular later filed applications, it's not, as the defendants said, that this issue wasn't raised more than once. This issue came up. But the issue came up in a way that makes it pretty clear, that makes it absolutely clear that they were disclaiming the dipeptides.

Now, in that later filed application, the patent examiner said that the patents in suit and that the claims of these patents in suit compared to the CIP were either, one, obvious variants, or if they weren't obvious variants they were something that still had to be practiced in order to perform the CIP claims because the CIP would be required to do them but it would allow additional materials to be added.

How do I get rid of this little red mark that is on here, Your Honor?

THE COURT: That is your presentation. I don't

know.

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MR. MOORE: There may be a way to clear the screen.

MR. CHAMBERS: We can talk around it.

The examiner said in the patent prosecution that we are talking about here, said that the claims were either obvious variants of the patents in suit or you couldn't practice the claims of this CIP without practicing the patents in suit because in those particular patents in suit it allowed additional nonspecific additions.

Let's look what it says. He rejects it. Then we have got these three patents up here are the patents in suit. They are not patentably distinct from each other because either one set of claims is obvious over the variants of the other claim sets or a skilled artisan would not be able to practice the invention of the claims set without practicing the invention of the other claim sets in particular because the transition phrase "comprising" --

THE COURT: Can't see it.

MR. CHAMBERS: Thank you. -- "comprising employed in the claim sets which allows additional non-specified elements covering the claim."

Now, that means two very important things, Your Honor. The first is that the examiner did not see these claim sets as ADOP. He didn't see them as amino acid,

dipeptide, polypeptide or oligopeptide. Otherwise, they wouldn't be obvious variants. But they would be covering the same subject matter. In other words, you would have an "I claim this in one and I claim that in the other one."

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And there is a second thing that's taught.

These earlier claims did not claim the dipeptides because they only rendered the claim obvious due to additional nonspecific additions.

In other words, it wasn't that beta-alanine included ADOP. It was beta-alanine. It was a comprising claim. So it was open-ended. That's what made the examiner say, wait a minute. This is not acceptable. In other words, if ADOP were correct, the dipeptide would not be what the examiner called additional nonspecific additions because of the comprising, but would already be something that was there in the claims.

Then the applicants filed their response. And for each one of the patents the applicants went through and they said none of the methods of Claims 1 through 11 of the '596 patent recite or encompass a composition that contains a mixture of creatine, anserine or balenine. Those are the dipeptides. So none of those contain that. That is for the '596.

For the '098, they say neither Claim 3 nor Claim 4 of the '098 patent recites a composition that includes a

mixture of creatine, anserine or balenine.

And for the '361 patent, they say that none of the claims recite a dietary supplement that includes a mixture of creatine and the dipeptides. So once again they were disclaiming the dipeptides.

Now, if you look at that response, they indicate that dipeptides are not encompassed by the earlier patents no less than ten times. You can find that, that is the McKeague declaration, Exhibit C.

So we think that it was clear the first time when Setra said -- when they said Setra teaches dipeptides, if it meant ADOP, it's 102 anticipation. You can't issue that. We think the examiner knew what he was doing. He was just being very precise in analyzing what was there.

Now, there seems to be some issues regarding

Genentech. The Court has indicated an interest in

Genentech.

THE COURT: Only because the parties cite it.

MR. CHAMBERS: We believe <u>Genentech</u> would apply if you consider there to be multiple definitions. We think that the disclaimer is pretty clear. We think that --

THE COURT: Do you consider there to be multiple definitions? Do you agree with the defendants that there are not multiple definitions?

MR. CHAMBERS: Your Honor, what we believe is

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there aren't multiple definitions, it is clear. But even if there are, Genentech says it should go a certain way.

THE COURT: <u>Genentech</u>, the Court there was dealing with multiple definitions. And they made it clear that that is what they were dealing with. If you are in agreement, I don't have to re-read <u>Genentech</u> again. It's not an issue.

MR. CHAMBERS: Your Honor, they say that

Genentech went down to structural issues. We believe that
these are structural issues, too. The definition of
beta-alanine just like in Genentech --

THE COURT: That is what the Court did in order to discern the meaning of the terms at issue. The principal issue, it seems, is there is no disagreement between the parties or at least the present situation is --

MR. CHAMBERS: Your Honor, we don't believe there are multiple definitions.

THE COURT: Counsel, don't interrupt. I am going to interrupt you from time to time, but that's what judges do.

Tell me if you disagree. It sounds to me like there is agreement among the parties that <u>Genentech</u> really doesn't apply in this case because there are not multiple definitions. Yes or no?

MR. CHAMBERS: I agree, Your Honor.

1 THE COURT: We don't need to talk about 2 Genentech anymore. 3 MR. CHAMBERS: We believe, Your Honor, there is one definition -- when you file an application --4 5 THE COURT: Go back to the podium, counsel, 6 unless you need to use the Elmo. 7 MR. CHAMBERS: I have just blanked. I should 8 have stayed up there at the Elmo. 9 THE COURT: Go back. It may jog your memory 10 somehow. 11 I know the feeling. Take your time. You were 12 talking approximately Genentech and... 13 MR. CHAMBERS: I am sorry, Your Honor. 14 When you file an application at the Patent 15 Office, you file it, and then many months later it gets 16 acted on even if you file a petition to make special. You 17 have crafted a particular application, you file it, and then 18 during prosecution you will narrow the claim, you will 19 narrow what you are going after. And that's why prosecution 20 history is very important in finding out what the applicant 21 eventually intended or eventually obtained. 22 THE COURT: Counsel, I understand prosecution 2.3 history. I really do. MR. CHAMBERS: Counselor has indicated that 2.4

Phillips doesn't say -- or says that the lexicography

1 governs. Phillips is very clear about the prosecution 2 history, the importance of the prosecution history. 3 THE COURT: Wait a minute. Phillips doesn't say anything different that hadn't already been said previously 4 regarding lexicography. Do you disagree with Mr. 5 DiGiovanni's statement of the legal proposition? 6 7 MR. CHAMBERS: If his statement of the legal proposition is if you have some ambiguous definition in this 8 9 the specification --10 That is not what he is saying. THE COURT: don't understand him to advance the proposition that you 11 12 only go to the concept of lexicography if there is 13 ambiguity. What I believe the cases say is that the 14 applicant is free to act as his or her own lexicographer. 15 Is that your contention, Mr. DiGiovanni? 16 MR. DiGIOVANNI: It is, Your Honor. 17 THE COURT: Do you agree with that? 18 MR. CHAMBERS: Absolutely Your Honor. Then the 19 applicant is also free to narrow that definition. 20 THE COURT: Yes, certainly, in the 21 back-and-forth, in the negotiation that occurs between the 22 examiner and the applicant, that happens. We know that. 2.3 Okay. 2.4 MR. CHAMBERS: Your Honor, I may have misspoke.

Originally, when I said Genentech doesn't apply, there is

another way to look at this. And if you are saying that there are multiple definitions and that the one is a definition of an amino acid and the second definition is a component of a dipeptide and the third is a definition of how the active derivative plays in with that, then there would be multiple definitions. I don't believe that, the way I look at it, that they gave a definition of beta-alanine that included the residues in those dipeptides in terms of the claims of the patents in suit.

THE COURT: Who is "they"?

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MR. CHAMBERS: The inventors.

THE COURT: But I was only trying to understand your position for purposes of this exercise as to whether there are multiple definitions. And that was the context of Genentech, I thought. I thought you said, No, there are not multiple definitions being advanced by the plaintiff. Is that your position?

MR. CHAMBERS: That's correct, Your Honor. But if the Court construes it as there is a definition that it is an amino acid and a definition that it is the residue of a dipeptide, then, under that consideration or under that analysis, I would say, okay, yeah --

THE COURT: I will make it clear in a footnote or two in my order as to whether I am applying Genentech. I will try to do that. I don't think I am going to have to go

there. But go ahead.

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MR. CHAMBERS: Finally, Your Honor, the claims that were spoken of by the defendants dealing with the '294 patent, those are claims that don't even use the term beta-alanine and don't even use the term L-histidine. Those are claims that don't go there. So I don't see how they help to illuminate what beta-alanine means or L-histidine means. Instead, those claims address dipeptides and indicate very clearly what's being claimed.

With that --

THE COURT: Here is what I am going to do. We can't spend as much time on other terms. But my sense is that this is, as it were, sort of where the rubber meets the road in this case, these three terms we have been talking about. So I am going to do something I don't typically do. I am going to let Mr. DiGiovanni respond. And then I will give you the last word.

MR. DiGIOVANNI: I appreciate that, Your Honor. Thank you very much.

I will start by addressing your question about the public notice function and Congress and the Supreme Court.

I certainly agree that the public notice function is of critical importance. I think Congress is currently debating this American Events Act and looking to

protect American companies and other companies around the world when it comes to inventing and having a good understanding of what is already patented and how to avoid patents, et cetera. So the public notice function is critical. That is why the Federal Circuit has stated that when you have a prosecution history statement, it needs to be clear and unmistakable. I think Mr. Chambers on several occasions said, I think it's pretty clear that... That doesn't cut it. Even if it were pretty clear, we certainly don't agree that there was anything even close to pretty clear or clear or even a disclaimer.

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There just was no disclaimer that was clear and unmistakable that a person of ordinary skill in the art in reviewing the entire file, the patents, and the prosecution history would understand that, in fact, these particular inventions that were covered by the express definition were excluded. An inventor wouldn't do that, especially in view of Claim 3, Your Honor.

I want to go back to Claim 3. Let me just make a switch here.

We have up on my Slide 36. Going back to this Claim 3 situation, this slide, while it doesn't show Claim 1, Claim 1 talks about a composition that further comprises, and goes on and describes it. Claim 3 doesn't say where the composition further comprises a dipeptide. Claim 3 says,

wherein the beta-alanine further comprises a dipeptide, oligopeptide, or polypeptide.

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There is no way to read that without coming to the conclusion that, well, that means a beta-alanine. As that term is used by the inventors, there is no way to read that without understanding that beta-alanine does, in fact, encompass beta-alanine as a component of the dipeptide and oligopeptide and polypeptide.

I think what plaintiffs argued was -- and I am not completely sure this is what they argued -- but apparently they are saying you have a beta-alanine, and then you have something else attached to it, then you have something else. And they say, well, that would still be the beta-alanine individual molecule. No, it certainly wouldn't. Their definition would expressly preclude the beta-alanine from being called beta-alanine because their beta-alanine says it has to be by itself.

Once you have beta-alanine further comprising a dipeptide, once it's part of that bigger chain, then under their definition it is no longer beta-alanine. Well, that is completely inconsistent with Claim 3.

So going back to the public notice function and the rules of claim construction, there is a requirement that all the claims need to make sense. And their construction completely destroys that.

Just a couple other points.

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The CIP application, Your Honor, I think they are arguing for an after-the-fact reverse disclaimer. In these earlier patents, you can't do that. I don't understand their later arguments to have any effect on claim construction.

And the arguments had nothing to do with the definition of beta-alanine that a person of ordinary skill in the art would understand in reading their patent, where there is an express definition and reading the claims and the prosecution history.

And then I don't need to address Genentech, Your Honor, because there is one definition, and the definition is up on the poster board, because we adopt ours directly from the inventors' definition, and I just don't see how that can be multiple definitions.

I think that's all I have, Your Honor.

THE COURT: All right. We will give Mr.

19 Chambers the last word on this round.

MR. CHAMBERS: Your Honor, just two minor points. I am sorry for my Midwestern upbringing that makes me say "pretty clear" rather than "clear." I think it's quite clear.

But in addition --

THE COURT: Is that a unique feature to

Midwesterners?

MR. McKEAGUE: It is, Your Honor.

THE COURT: We have got some affirmation here.

MR. McKEAGUE: It is.

MR. OPARIL: It is extrinsic evidence, Your

Honor.

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(Laughter.)

MR. CHAMBERS: Your Honor, when they say that the beta-alanine further comprises a dipeptide, the other way to look at that is that the beta-alanine is a dipeptide of beta-alanine and it's not the carnosine dipeptide, in other words, that it can be two beta-alanines linked together. So we don't see that this precludes having Claim 1 address just that it's just the amino acid.

In addition, one of the things that I had needed to address earlier was that when they had indicated that the present invention provides for dipeptides, peptides, and peptide analogs, as explained in our brief, Your Honor, that is referring to the invention and what goes on in the muscles and what goes on in the cells. That is not saying, you know, that this is addressing the particular way that you interpret the claims.

THE COURT: All right. Why don't we take a bio-break and come back in a few minutes.

(Recess taken.)

1 THE COURT: Please take your seats. 2 I am hoping we can get through the rest of this That would be my preference, quite frankly. 3 by 1:00. 4 MR. CHAMBERS: I believe we can. 5 THE COURT: All right. The next term that we are going 6 MR. CHAMBERS: 7 to consider, Your Honor, is dietary supplement. 8 We believe dietary supplement means in addition 9 to the normal diet, in the form of a pill or capsule, 10 tablet, a powder or a liquid form, which is not a 11 conventional food and effectively increases the function of 12 tissues. 13 Now, dietary supplement must be construed. 14 you look at the --15 THE COURT: There is a disagreement among the 16 parties over that. Right? 17 MR. CHAMBERS: Yes. The defendants have indicated that it shouldn't be construed because --18 19 THE COURT: It's in the preamble. 20 MR. CHAMBERS: -- it's in the preamble. 21 However, looking at the actual patent, you find 22 that Claim 1 and Claim 5 are exactly the same except for the 2.3 term dietary supplement and composition. I have highlighted 2.4 those for Claim 1 and Claim 5. You find that same issue for Claim 10 and Claim

17: composition and dietary supplement.

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Finally, in 22 and 25, it simply says dietary supplement. That is the only change in those terms.

If dietary supplement did not have meaning, the Patent Office would have been issuing not only two claims to exactly the same thing, exactly the same invention, but three sets of claims to exactly the same invention. They would have done this three times. We don't believe that that is the case.

In addition, we believe that dietary supplement is very important for the claim term.

The second and third paragraphs of the patents in suit describe dietary supplements. These are typically not conventional food. Specifically, the patents in suit disclose the importance of supplements to compensate for the reduced levels of nutrients in the diet. For example, at Exhibit 3, Joint Exhibit 3, Column 1, Lines 18 through 21, that demonstrates that the applications are intended that the supplements of the invention are something other than simply conventional food because they were intended to compensate for reduced levels in the diet.

In addition, conventional foods like meat and animal products can't be used as a supplement to diets of certain people like vegetarians, it is something that the patent is not saying to use conventional foods to alleviate

these issues, but to use a dietary supplement.

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For example, in Exhibit 3, Column 3, Lines 54 through 59, it says that you lose some of these with conventional cooking. Beta-alanine only comes from animals. So you wouldn't be getting it if you were a vegetarian. It's got to come from a dietary supplement, something that is not conventional food.

Now, when referring to natural foods, the patents don't call them dietary supplements. For example, at JX-3, Column 11, Line 56, it refers to chicken broth as a natural food, not as a dietary supplement. These substances are not food themselves.

In addition, when they are adding the beta-alanine amino acid to feed, they say that these substances were added to the feed. And if they were actually feed themselves it wouldn't be stated that way.

If you went to a pharmacy, Your Honor, and asked for a dietary supplement, and the pharmacist said you can get chicken breasts over in Aisle 4 and broccoli over in Aisle 3, you would think he misunderstood you. That is not the way people normally use the terms. This is something that needs to be construed because the Patent Office doesn't issue multiple claims for the same invention.

We will hear from the defendants now?

MR. HANSEN: Your Honor, we have on the screen

Slide 48. What we have done here is on the left-hand side we have shown defendants' construction, on the right-hand side, plaintiffs' construction. And then what we have done on each side is explaining the parties' positions.

As plaintiffs' counsel pointed out, there is two key issues here. The first is do we even get to the construction issue. We contend that we do not, because dietary supplement is not a limitation.

The second issue is if the Court decides it has to construe the term, how should it construe it. As shown here on Slide 48, we contend that dietary supplement is a mere statement of intended use and it should not be construed by the Court. And there are several reasons for that. They are summarized here on the right, and we will go through them individually.

First, it's recited only in the preamble, and the bodies of the claims do not refer back to the term.

Second, the phrase dietary supplement was not used to distinguish the prior art in the prosecution of the '361 patent, which is the patent in which the term appears.

And finally, the specification does not demonstrate that the term dietary supplement is a necessary and defining aspect of the invention. It merely says that the composition can be a dietary supplement.

When we are looking at the specification, we

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have to take a look at whether we have words that are mandatory or requirements versus just words that describe possible embodiments.

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We have reprinted the claims from the '361 patent here just to illustrate with the yellow highlighting that dietary supplement does indeed occur only in the preamble. This term "comprising" is known as a transition word in patent claim drafting, and dietary supplement occurs in the preamble, and there is no subsequent reference made to it after the word comprising. That doesn't seem to be in dispute.

The phrase dietary supplement was not used to distinguish the prior art in the prosecution of the '361 patent. Now, the Federal Circuit has certain recognized circumstances under which a preamble may be limiting. One of them is if the preamble is subsequently referred to in the body of the claim. As we just explained, that is not true here. One of the other ones is if the preamble is used to distinguish the prior art. And again, that wasn't the case here. And so, not surprisingly, we didn't see anything from the plaintiffs showing that there was any mention made of it.

So the plaintiffs in their briefing seem to hinge their argument on the fact that the dietary supplement phrase is a necessary and defining aspect of the invention.

We have excerpted the quote from the brief here on Page 13 of the opening brief. Really, the specification doesn't say that.

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What we have done on Slide 51 is we have excerpted places in the specification that refer to the term dietary supplement. Column 3, Line 40, The composition can be a dietary supplement. At Column 5, Line 55, The composition can be ingested as a dietary supplement.

These are not words of exclusion or requirement, the type of words that the Federal Circuit typically looks to when they are saying that the claims should be limited to something in the specification. And it doesn't indicate that the use of this as a dietary supplement is a necessary or defining aspect of the invention, despite the plaintiffs' suggestion otherwise.

Now, I want to address one of the points that plaintiffs' counsel made initially, which is that if this term is not construed that it would render certain claims identical to one another.

And just to refresh the Court's recollection, counsel showed the claims of the '361 patent, and there is actually sets that say composition and dietary supplement, and those sets have the same limitations in the body of the claims.

And what counsel said is, well, if you accept

defendants' contention that the preamble not be construed, these pairs of claims would be rendered identical. We don't disagree. The bodies of the claims are the same. So if the preambles are not limitations, they would be the same. The question is what is the import of that.

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Now, plaintiffs' counsel also said the Patent
Office doesn't issue patents with the same claims in them.
There is a rule in the Patent Office that you are not
supposed to issue the same claim twice in the same patent.

But it's a Patent Office rule. The Court would not be rendering the claims invalid by failing to construe the preamble. It would merely be saying that in this instance the Patent Office rule was not adhered to.

Now, the Federal Circuit has laid out the circumstances under which we are to treat a preamble as a limitation. And as we said, it's when it's referred back to in the body or when it's described as a defining and necessary aspect of the invention or when it's used in the file history.

In our view, this consideration that some claims might be rendered duplicative simply doesn't trump those Federal Circuit principles. If it turns out that the claims are duplicative, well, then, the examiner should have handled it differently and required them to put something in the body of the claim to make the thing actually a dietary

supplement.

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THE COURT: Is it always the case -- maybe this isn't exactly that. I am trying to remember the Federal Circuit precedent that says when a Court is presented with a dispute it must resolve the disputed definition of claim terms. This isn't exactly that situation, is it?

MR. HANSEN: I don't think the Court needs to resolve the construction dispute if as a threshold matter it finds the preambles are not limiting.

THE COURT: If I don't find that threshold, I would to resolve that.

MR. HANSEN: Then I believe if there is an actual dispute, it would have to be resolved.

THE COURT: All right.

What would be wrong with, if I did determine that it needed to be resolved, that there was a dispute, the plain and ordinary meaning of dietary supplement?

MR. HANSEN: Well, then, the fact-finder is going to look at individual pieces of prior art and conclude, make some determination as to whether the thing is a dietary supplement as opposed to something that just has what's in the body of the claim. I don't know what that -- I don't know how they are going to make that determination if it was just left unconstrued.

THE COURT: Well, the construction would be its

plain and ordinary meaning.

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MR. HANSEN: The problem is that that plain and ordinary meaning would further limit the claim, and the fact-finder might say that certain pieces of prior art are not invalidating because they have applied that plain and ordinary meaning.

The thing I just wanted to emphasize here is that plaintiffs' argument about the import of this rendering certain claims redundant is somewhat inconsistent with their other position. How can it be the case that dietary supplement is a necessary and defining aspect of the invention if in the same patent they included claims that just say a composition?

This seems to be the principle that they are relying on in the first instance to warrant limiting the claims to the preamble. And yet the fact that they recite composition claims which don't even use the words dietary supplement seems to undercut that position.

So if the Court is inclined to construe the term, then the question is, how should it? And that's what we are going to look at in the next set of slides.

Okay. Here again we have repeated the construction, so we contend that a dietary supplement is a product or substance that is added to the diet.

Plaintiffs contend it's in addition to the

normal diet, a pill, capsule, tablet, powder, or liquid form, which is not a conventional food, and effectively increases the function of tissues when consumed.

Why do we think our construction is correct?

First, the parties agree that a dietary supplement at least includes the idea that it is something added to a diet. On that point, we don't seem to disagree. The specification confirms that dietary supplements are products or substances added to the diet. It doesn't expressly define the term.

But in the way that it's used it suggests they are things added to the diet. And further dictionary support the defendants' construction.

I understand the Court would at least entertain that limited form of extrinsic evidence. If not, let me know, and we will skip it when we come to the slide.

Why do we believe the plaintiffs' construction is wrong? First of all, the specification does not limit dietary supplement to those that are consumed, and yet their construction suggests they must be consumed. Plaintiffs' construction excludes or reads out a particular portion of Example 2 in which a chicken broth was used as a means of providing dietary supplementation. And the language of the example itself shows that, and we will get to that in a few moments.

Plaintiffs' construction also limits dietary

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supplement to specific forms of dietary supplements, pill, capsule, tablet, powder, or liquid, even though the specification doesn't warrant limiting the term to a particular form.

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We also believe the specification does not limit dietary supplements to those that increase the function of tissues nor does it limit the invention to vegetarian diets, to nonconventional foods. These are the summaries. We are going to go through these individually. I wanted to preview them before we jumped into the individual slides.

Quickly, here is the language from the beginning of plaintiffs' construction that a dietary supplement is in addition to the normal diet. We say it is a product or substance that is added to the diet. We both seem to agree that you add something to the diet as part of the construction.

Slide 54, we show that the specification confirms that dietary supplements are products or substances added to the diet. In Column 1 it says natural food supplements are typically designed to compensate for reduced levels of nutrients in the modern human and animal diet.

Column 6, Lines 56 to 60 of the '361, shows an example. During the supplementation period, an identical feeding regime was implemented. However, each hand-fed meal was supplemented with beta-alanine and L-histidine.

The term, in the sense that it's used, it's something that is added to the diet.

The next slide is a dictionary definition. I

don't know --

THE COURT: Sure.

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MR. HANSEN: Here we have two dictionary definitions from the declaration of Mr. Walter, Exhibit D in his first declaration. Dietary is used as an adjective. Supplement is used as a noun. So we see the dietary adjective form, of or relating to a diet, or the rules of a diet. Then the noun form of supplement, the first definition is something that completes or makes an addition. And it actually uses dietary supplements in that particular definition as an example of a type of supplement.

We believe that these dictionary definitions further support defendants' construction that a dietary supplement is simply proper substance added to the diet.

With that, let's look at why we believe plaintiffs' construction is incorrect. On Slide 56 we provide the first reason. The specification does not limit dietary supplements to those that are consumed. We believe that the word consumed to a fact-finder would ordinarily connote some sort of taking it in orally. We believe that that implication is not warranted because in several places the specification makes clear that the compositions can be

provided by ingestion or infusion, e.g., injection. That is from Column 3 of the '361 patent. And the composition can be administered orally, enterally, through the digestive tract or parenterally, outside the digestive tract.

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Similarly, in Claims 9, 21, 34 of the '361 patent, they all describe the dietary supplement as being an injectable formulation. We believe that this consumption limitation suggests otherwise in plaintiffs' construction.

So we believe that it's improper to construe this claim in a manner that's inconsistent with these excerpts from the specification.

Just to be clear, this fourth claim here at the bottom of Slide 56 is from the '084 patent, not one of the three patents in suit. It is in the family that Mr.

DiGiovanni referred to in his presentation.

All right. Next reason we believe plaintiffs' construction is incorrect is that it excludes or reads out the chicken broth of Example 2. Now, I believe during plaintiffs' presentation it was stated that the chicken broth is not described as a dietary supplement, it's only described as a natural food in the patent. We don't agree with that, because of the language that is highlighted here on Slide 57. Slide 57 says, it's discussing that Example 2 discusses the effect of supplementation of a normal diet.

And to show that effect, one of the experiments that was

done is to provide a chicken broth to patients, and then have them ingest it, and then determine in their blood what the concentration of free beta-alanine was.

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So the way that the terms supplementation of a normal diet are used in Example 2 in direct linkage with the consumption of a chicken broth seems to us to compel the conclusion that chicken broth is being used as an example of a dietary supplement here.

If we look at Figure 8, which is a figure that displays the data generated in Example 2, what we have done here is highlight in blue what happened when the test subjects ingested this chicken broth. And this is freed -- beta-alanine in the bloodstream. You can see from the blue line that it went up quite a bit due to the ingestion of chicken broth.

If plaintiffs were correct that a dietary supplement cannot be a conventional food, then this chicken broth example would not be within the scope of their invention. And as the Court knows, it's rarely correct under Federal Circuit precedent to construe a claim in a way that reads out a preferred embodiment.

The next issue with plaintiffs' construction is that it limits the term dietary supplement to specific forms in which the dietary supplement is provided: pill, capsule, tablet, powder or liquid. If you searched the '361 patent

for the word pill, you won't find it, nor will you find the word capsule, nor will you find the word tablet, nor will you find the word powder. You will find the word liquid and you will find the word solid.

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But the plaintiffs seek to define this term with these specific forms that are not even disclosed in the application.

For that reason we think it's improper as well to limit dietary supplement to the forms specified in plaintiffs' construction.

Next, plaintiffs' construction requires that in order to be a dietary supplement, the material must effectively increase the function of the tissues when consumed. Now, the place that they seem to get this from is Column 1 of the '361 patent starting at Line 18. It reads, "Natural food supplements are typically designed to compensate for reduced levels of nutrients in the modern human and animal diet."

The next sentence reads, "In particular, useful supplements increase the function of tissues when consumed."

That's the basis for the last limitation here, "effectively increases the function of the tissues when consumed."

We don't agree that that type of statement given in the background of an invention defines what dietary

supplement means. Sure, it describes a class of useful supplements as those that increase the function of tissues. But other supplements may do other things. Maybe they add something to the blood or provide things that are otherwise missing.

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But in our view that type of language is not the type of language that is defining or limiting in the way that plaintiffs would suggest in saying that it should be used to construe dietary supplement.

So the next issue is, or the next thing that the plaintiffs rely on to support their limitation to conventional food is this excerpt from the '361 patent, which reads that the compositions and methods can contribute to correcting the loss of beta-alanine, L-histidine, or creatine due to degradation or leaching of these constituents during cooking or processing. The compositions and methods can also contribute to correcting the absence of these components from a vegetarian diet.

Okay. Fine. Those are possible benefits of implementations of the invention. But that doesn't mean that they limit the meaning of dietary supplement to a conventional food. First of all, you can correct the loss of beta-alanine or creatine due to degradation or leaching by supplying more conventional food that has the desired elements in it.

For example, if I eat a steak, and I don't get enough of what I want in the way of beta-alanine, I can have some chicken broth, according to Example 2 of the patent, and that will be a way of addressing that issue.

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So the mere fact that in certain foods there are cooking losses doesn't mean that dietary supplements must exclude conventional foods, as the plaintiffs suggest.

And finally, vegetarians obviously don't have in their diet certain meat sources of beta-alanine like carnosine. Well, that is fine. We don't dispute that the invention is claimed broadly enough so that a vegetarian's diet could be corrected. But that doesn't mean it needs to be limited to that circumstance. Maybe just because a particular vegetarian couldn't supplement their diet with conventional foods because otherwise they wouldn't be a vegetarian doesn't mean that the word dietary supplement has to exclude conventional foods.

That is what we have on dietary supplement.

If the Court has any questions...

THE COURT: Thank you.

Your response, if any, Mr. Chambers.

MR. CHAMBERS: Your Honor, as pointed out by defendants at JA3, Column 3, Lines 40 through 41, it says a composition can be a dietary supplement. That clearly indicates that a dietary supplement is something that is

different than -- a dietary supplement is something that is different than just a composition. They pointed out that there is a rule in the Patent Office that you shouldn't do this. No less than three times do they seem to do this.

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It is clearly something that is in dispute here because we believe it's limiting. They believe it shouldn't even be part of the claim.

In the second and third paragraphs of the patent, they cover what dietary supplements are. We think that when they are talking about chicken broth, they describe chicken broth, as you recall, as a natural food. That is on Line 68 of I guess JA68. And when you're looking at Table 4, "broth" is there, but it's there as a control to show the difference between that and beta-alanine. It is something entirely different.

In terms of Column 1, Lines 18 through 25 of Exhibit 3, under the patent law it's got to be useful to be patentable. And so the fact that they say that this is useful, that's just saying what's known under patent law.

Chicken broth, clearly, if you look through the patent, it is not a preferred embodiment. It is something that's mentioned and it's a control where they show the difference between beta-alanine and chicken broth, indicating that they think it's something different. And you can find that in Table 4.

That's all we have on that one.

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THE COURT: Thank you, counsel. Let's go on to the next one.

MR. CHAMBERS: One other point.

Claim 9, 21 and 27, where they say it's injectable, if it is a conventional food, clearly, it's not something that is injectable, Your Honor. So it's something that is different.

THE COURT: Okay. Which one is next for plaintiff?

MR. CHAMBERS: Providing an amount of beta-alanine to blood or blood plasma effective to increase the beta-alanine dipeptide in the human tissue means supplying to a human an amount of beta-alanine by ingestion. We said it was by ingestion. We talked to the other side and we proffered the idea that it was more than ingestion because they had pointed out in their briefs that it could also be by injection, which is infusion. So we proffered this present term that you see that it means supplying to a human an amount of beta-alanine or L-histidine by ingestion or infusion and therefore causing an increase in beta-alanine or L-histidine in blood or blood plasma above the normal concentrations found in the typically fed state and thereby increasing the synthesis of beta-alanine.

In the simplest form, Your Honor, we see that

1 basically means providing beta-alanine by ingestion or 2 infusion to increase beta-alanine in blood above its normal concentration and increase beta-alanine with histidine. 3 4 We have indicated in our briefs why we believe that it needs those attributes. And we will rest on the 5 briefs in that respect. But the reason we are concerned 6 7 about their particular term is that we don't understand what is meant by indirectly or directly --8 9 THE COURT: I have a question about that as 10 well. MR. CHAMBERS: 11 Okay. 12 THE COURT: They can respond. 13 Counsel, I am going to ask you not to go through 14 each of the slides. 15 Should I jump into the individual MR. HANSEN: 16 ones? 17 THE COURT: I think you should start off by 18 addressing the question I asked. 19 Indirect or direct. MR. HANSEN: That's fine. 20 THE COURT: That is troubling. 21 MR. HANSEN: To be clear, what we have done is 22 used the same language of the claim and have that in the 2.3 front. We used it because we understood that the plaintiffs 2.4 were going to try to limit the route of the providing.

Indirect or direct covers the universe. I don't think

it's -- that's a closed set. I don't think there is anything not covered by direct or indirect. That language just indicates, as does the limitation itself, that it can be provided by any route. For example, in the patents --

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THE COURT: Why not just say that? I don't know how you would word it. My feeling is that perhaps directly or indirectly will cause this fact-finder to scratch his head and say, well, what do they mean? You have the benefit and the luxury of speaking to the future fact-finder. You don't have to worry about whether a jury understands. I am telling you right now, I don't know what that means.

MR. HANSEN: We could certainly live with a modification where it just makes clear that it doesn't matter what the route of providing is, which is what we are trying to do here.

THE COURT: Mr. Chambers, your view here?

MR. CHAMBERS: Our concern is they have really expanded it by saying indirectly or directly. Now they are saying it can be by any means.

This patent is about supplementation of the diet, food supplements, and it's not about things like exercise. It's known that exercise increases the dipeptide in the muscle. Is that going to be something we are going to be fighting over in the future? There has got to be a limit.

THE COURT: Is exercise an issue?

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MR. HANSEN: The claims we are talking about, these are method claims. They don't have dietary supplement in them. Even though the specification may speak to that --for example, one of the asserted claims that recites this limitation is Claim 1 of the '596 patent, and it's got two limitations. One of them is the limitation that is on Slide 61, and the other one is that you expose the tissue to the blood or blood plasma whereby the concentration of beta-alanine and L-histidine is increased in the human tissue. It's that broadly written.

Now, there is no limitation on the way that the providing step occurs, and we just want to make that clear. If to the Court that is clear enough on the record, then we are not concerned about it. But the patent makes clear that you can get -- what we are talking about here, Your Honor, is what happens in the blood, not talking about what happens at the point of delivery.

THE COURT: Understood.

MR. HANSEN: The patent explains that you could ingest the single amino acid beta-alanine and it would go through the digestive tract into the blood, but you could also ingest carnosine, and it will break down into the single amino acid, beta-alanine and L-histidine, and get to the blood. If you inject it, it goes directly to the blood.

1 If you ingest it, it goes indirectly to the blood. 2 We were just trying to make that point, that there is no limitation. Again, if the Court thinks that 3 4 it's clear on this record and that we don't need those 5 terms... THE COURT: I am trying to see if there is a 6 7 basis for agreement here. 8 MR. CHAMBERS: Your Honor, a claim is construed 9 in view of the specification. When the specification is 10 going through and explaining how you supplement the diet, 11 and how you add beta-alanine to something, if somebody says, 12 well, it turns out that a little bit of exercise, like 13 walking down the street is going to do this, I don't think 14 that that is covered by the claims. 15 THE COURT: What is your reaction? 16 I hadn't really considered or don't MR. HANSEN: 17 know to what extent that would happen. 18 THE COURT: I think you are both talking about 19 some form of infusion or injection, something placing the 20 supplement inside the body. 21 MR. HANSEN: Something gets the material to the 22 blood. 2.3 THE COURT: To the blood. 24 MR. HANSEN: That is what the claim limitation

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says.

1 THE COURT: And not by as indirectly as 2 exercise. That is why I keep asking, Mr. Chambers, and you keep arguing. Just tell me there is no basis for agreement. 3 4 MR. CHAMBERS: There is no basis for agreement, 5 because as it turns out, Your Honor, it is definitely true that the dipeptide increases in the muscle when there is 6 7 exercise. 8 This is a patent that is going to the 9 supplementation of the diet. It's not going to whether or 10 not you should get up and do a couple laps. 11 THE COURT: I think that's agreed upon. Right? 12 This is talking about supplementing the diet of a human 13 being. Right? 14 MR. HANSEN: I don't know how exercising would 15 be providing something. It's just supposed to be something 16 internal. 17 THE COURT: I guess maybe I am not making myself 18 I don't understand why the parties can't agree. 19 you agree on what the invention is, its purpose, its 20 intended purpose is to supplement the diet, and let's for 21 the moment say -- well, by means of ingesting some 22 supplement or injecting it in some way into the bloodstream, 2.3 and that's what seems to be at issue -- Mr. Chambers? 2.4 MR. CHAMBERS: Your Honor, that third

explanation that we had, where it was explained in its most

1	simple form, that covers exactly what you have said. It
2	covers ingesting it, eating it, or infusing, it covers all
3	those. And it doesn't have the problem of being direct or
4	indirect and pulling in things that we don't know where they
5	are going to go.
6	THE COURT: Why indirect or direct? I don't
7	understand the need.
8	MR. HANSEN: It was simply because there seems
9	to be a dispute as to whether there is any limitation on the
10	pathway by which the material can be provided.
11	There are several other issues that I want to
12	make sure we don't skip.
13	THE COURT: He just articulated some
14	limitations
15	MR. HANSEN: They are
16	THE COURT: Counsel, I am going to say the same
17	thing to you: Don't interrupt the Court.
18	MR. HANSEN: I am sorry.
19	THE COURT: Do you disagree with that?
20	MR. HANSEN: Yes.
21	THE COURT: Go ahead.
22	MR. HANSEN: Surely, the specification has
23	examples that are provided by certain routes. But in this
24	claim they chose not to incorporate any of those particular

routes and to just leave it written as broadly providing an

amount of this material to the blood or blood plasma.

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And we have to ask ourselves, we have to step back for a second and ask ourselves: What are the circumstances under which we go into the specification and use the embodiments to limit the scope of the claim? And those circumstances are when they are described in a mandatory way or as a requirement of the invention or something along those lines.

We just simply didn't see anything in the specification that describes what the plaintiff is suggesting as mandatory in that fashion. Yes, it can be provided by ingestion. Yes, it can be provided by injection. Maybe there are other routes of delivery. But they chose not to limit this claim term to a particular route.

That is really the issue with indirect or direct. But there are several other issues that I think we want to make sure we get into with this particular limitation.

THE COURT: I am not sure there are. But go ahead.

MR. HANSEN: Sure, there are. If we look at plaintiffs' construction, they are also requiring that you cause an increase in blood or blood plasma of these materials above normal concentrations in a typical fed

state.

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Now, this limitation would require the fact-finder to look at what is happening in the blood, make some determination of what a normal fed state is, whatever a typical fed state means, then look to see if it is above that normal concentration.

That is nowhere in this limitation. It simply says you provide some amount of material in the blood and you increase the synthesis in the tissue.

THE COURT: Let me short-circuit this, because it is the plaintiff who is in my mind right now swimming upstream on this. I am going to let Mr. Chambers tell me why this definition doesn't work: providing an amount, in other words, adopting the defendants' definition absent the words directly or indirectly.

You should sit down, Mr. Hansen, and let Mr. Chambers take the podium.

MR. CHAMBERS: Your Honor, that is just the claim language.

THE COURT: That's right. Exactly. What is the matter with the claim language?

MR. CHAMBERS: There is some confusion as to whether or not this would embrace such things as exercise, which is not something that is described in the specification. The specification goes to supplements. And

since the specification goes to supplementing and providing something to a normal diet --

THE COURT: You know what I think that argument is? It's lawyers over-lawyering, with due respect. We are going to move on.

MR. CHAMBERS: Okay.

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Your Honor, the next term is looking at increasing the concentration of insulin in the blood. We believe it means that the concentration of insulin is increased by ingesting or perfusing, injecting insulin, or agents that would stimulate the production of insulin. Once again, we are in a situation where we don't want to have to construe in the middle of a trial indirect and direct. We are more concerned -- we rest on our briefs as to why that particular construction is appropriate. But most importantly, this is something that --

THE COURT: This is one where the defendants are swimming upstream, Mr. Chambers. I want to hear from the defendants on that.

MR. HANSEN: Your Honor, the issues here are the same as on the last term. I don't see a need to argue indirect or direct. You understand the reasons. If the Court wants to leave the claim term as it is, which it would be if we just dropped those two terms, we are okay with that.

1 THE COURT: I will let you react, Mr. Chambers. 2 MR. CHAMBERS: Your Honor, of course, if you are 3 going to accept what we have right here --4 THE COURT: Aren't we trying to increase the 5 concentration of insulin in the blood or blood plasma? Aren't you both saying the same thing? 6 7 MR. CHAMBERS: Yes. 8 MR. HANSEN: No, because they take that basic 9 part of the limitation and then they add the method by which 10 it's --11 THE COURT: By which it's done. Therein lies 12 your problem. 13 MR. HANSEN: Exactly. 14 MR. CHAMBERS: Your Honor, it is well known that 15 if you have a sugar pill that it's going to increase your 16 insulin level. If you eat some carbohydrate, it's going to 17 increase your insulin level. 18 The patent even talks about increasing the 19 insulin level that way. 20 So you can either ingest or infuse insulin or 21 some agent that stimulates the production of insulin. 22 Either way, you get the same result. 2.3 THE COURT: Go ahead, Mr. Hansen. 2.4 MR. HANSEN: We don't disagree that the 25 chemistry as described is correct. The issue is whether

1 that mechanism warrants limiting this claim term, which 2 speaks simply to an effect to a particular mechanism by which the effect occurs. 3 4 THE COURT: That's the issue, Mr. Chambers, that 5 the defendants have with your -- and I am sure your slide presentation and Mr. Hansen's presentation will tell me why 6 7 there is no support in the written description or the claims 8 for that. I suspect you are prepared to make that argument. 9 Right? 10 MR. HANSEN: Yes, we are. 11 MR. CHAMBERS: So I might as well sit down while 12 he does that. 13 THE COURT: No, no, because I am not prepared to 14 listen to it at this point. I understand what the argument 15 is. I have the benefit of the presentations. What I am 16 trying to do is get through this argument. But if I can get 17 you to tell me, we have now put a very fine point of where 18 the dispute is. Could you address your difference with the 19 defendants and tell me why you should prevail. 20 MR. CHAMBERS: The patents in suit indicate that 21 you can increase insulin by --22 THE COURT: You need to talk to me, not him. 2.3 MR. CHAMBERS: -- by providing carbohydrates.

You don't have to give an injection of insulin or ingest

insulin in order to do it. An agent such as a carbohydrate,

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something that is known to increase insulin, is just fine to satisfy that claim term.

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Exhibit 3, Column 3, Lines 42 through 45 --

THE COURT: If I accede to your suggestion, are we running afoul of one of the canons of construction and importing a limitation from the spec? That's a question. I am not saying that I am making that conclusion. I am asking you a question.

MR. CHAMBERS: Your Honor, I think we are expanding it. In other words, what defendants would do is they would narrow the way that you can get this insulin.

What we are doing is you can get it in an even broader way, you can get it by giving insulin or you can get it by giving some agent that will create insulin.

THE COURT: With respect, Mr. Chambers, it would seem that the defendants' proposal is very broad. They are saying directly or indirectly increase the concentration of insulin -- that is a paraphrase -- in the blood plasma. They don't place any limitations on it whatsoever.

MR. CHAMBERS: Your Honor, I can increase my insulin by going out for a run. I can do things --

THE COURT: Wouldn't that be an indirect --

MR. CHAMBERS: That would certainly be an indirect way of increasing it. But I don't think that is what the patent is talking about. The patent only talks

1	about using these agents using things like carbohydrates.
2	They are not saying you go out and get yourself a two-mile
3	run and your insulin will spike and then you will have this
4	benefit. That is not what the patents are about. They are
5	about supplementing the diet with some kind of a dietary
6	supplement, not go out there and get some more exercise.
7	So agents that stimulate the production of
8	insulin, I think that that is actually keeping it broader
9	and yet keeping the construction of the term within the
10	realm of the patents in suit of the disclosure.
11	THE COURT: I will take a look.
12	MR. HANSEN: Do you want to hear from me again?
13	THE COURT: No. I have got the issue. Let's go
14	on to the next claim term.
15	MR. CHAMBERS: Your Honor, there is one other
16	term here, unit dosage. I think we will rest on the briefs
17	for that.
18	THE COURT: Are you comfortable with that, Mr.
19	Hansen, Mr. DiGiovanni?
20	MR. DiGIOVANNI: Yes. In fact, that was our
21	proposal.
22	THE COURT: All right, counsel. The Court will
23	reserve, take the matter under advisement. And I should
24	have my order out more or less within 30 days.

Are there any other matters that you need to

1	take up with me while you are here in town? Or are we okay?
2	MR. HANSEN: I think we are okay.
3	THE COURT: The parties are getting along well.
4	That is good.
5	Counsel, thank you for the presentation.
6	(Counsel respond "Thank you, Your Honor.")
7	(Court adjourned at 12:40 p.m.)
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10	Reporter: Kevin Maurer
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